UNIVERSITY GRANTS COMMISSION

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FOR THE YEAR 1990-91



Presented to the Government of India
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of the UGC Act, 1956
New Delhi

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UNIVERSITY GRANTS COMMISSION
(1990-91)

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* Dr. Manmohan Singh took over charge w.e.f. 15.3.1991.

** w.e.f. 29th June, 1990.

*** Prof. Ram Lal Parikh w.e.f. 19.7.1990.

UNIVERSITY GRANTS COMMISSION

ANNUAL REPORT

April 1990 - March 1991

In compliance with Section 18 of the UGC Act, 1956 (No.3 of 1956) * we have the honour to present to the Central Government the Annual Report of the University Grants Commission for the year 1990-91 to be laid before both the Houses of Parliament.

INTRODUCTION

The University Grants Commission was establishd by an Act of Parliament. Section 12 of the UGC Act 1956 calls upon the Commission "to take in consultation with the universities or other bodies concerned, all such steps as it may think fit for the promotion and coordination of the university education and for the determination and maintenance of standards of teaching, examination and research in universities." Accordingly, the Commission has statutory authority of recommending to universities the measures necessary for improvement of education and also advise them to take necessary action in that regard. This also enjoins upon the Commission to enquire into the financial needs of universities and allocate/disburse funds for the development of the infrastructural facilities and other components of the university system.

The Commission has identified the following elements which help the university sector develop its academic leadership :

1. Courses of studies.
2. Quality of students and scholars.
3. Special Assistance Programmes.
4. Faculty improvement.
5. Infrastructural facilities including library, laboratory and other campus facilities.
6. Identification of research areas and funding.
7. Extension activities.
8. Common services and facilities.
9. National level tests.

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* The University Grants Commission Act 1956 (Act No.3 of 1956) as amended upto 1st October, 1984.

10. Educational opportunities for women and weaker sections of society.

In all the above areas, the Commission has contributed a great deal by making important recommendations which have been widely accepted in the university system. Such exercises are not one time, but continuing ones and the improvements/corrections to these recommendations continue to flow from the Commission. In making the recommendations, the UGC does not take a superior position over the university system, but holds consultations with over 7000 academics of the university system every year through meetings, national/regional seminars and visiting committees. The role of UGC is that of a coordinator and promoter of the cooperative mechanism of the academics of the university system which help the universities to develop excellence in the frontier areas of knowledge and maintain their academic leadership in the country. There are many recommendations, given in the following paragraphs, which have been fully operationalised in regard to the above stated components.

a) National test for junior research fellows/ lecturers assures the quality of manpower inputs to the university system and, in turn, helps the universities to maintain the standards of teaching and research in an indirect manner.

b) In almost all subject areas, over 1000 academics from the university system have helped the UGC to design standard teaching courses through national seminars etc. These include courses in Futurology to take care of emerging trends in specific areas. Model curricula have been designed for various subjects through Curriculum Development Centres.

c) For orientation of teaching staff to keep pace with the fast expanding knowledge, the UGC has commissioned 48 Academic Staff Colleges which are monitored centrally for deciding the extent and the number of courses to be organised by these colleges. The scheme has been assessed through an expert committee.

d) On the advice of expert groups and on the basis of the discussions the Commission holds with the university faculty, substantial sums of money have been provided to the universities and to selected departments under COSIST and Special Assistance Programmes to upgrade their laboratories.

e) When the Commission felt that it would need very large financial resources for strengthening some of the science laboratories of the university system and that too for more than one university in the same subject area, amendment of the UGC Act was made in 1984 to obtain under Clause 12(CCC) an authority for establishing common facilities. The Commission has consequently established Inter-University Centres in several areas.One of them, the Nuclear Science Centre, is a unique facility which has been set up on JNU campus and has recently been commissioned for use. An Inter University Consortium for using the DAE facilities has also been established. Several others are in the offing.

f) The INFLIBNET programme adds another dimension to the role of the UGC in evolving a computer communication network for linking libraries and information centres in

universities, deemed universities, institutions of national importance, UGC information centres, R & D institutions and colleges so that they could optimally utilise their resources for the benefit of the academic community at large. This would also provide mutual interaction to academics in widely separated locations.

g) The Commission has been emphasising the need to decentralise authority and confer autonomy to university departments and colleges with a view to create an elastic and dynamic system for promotion of innovation in teaching and reaearch and to ensure efficient functioning of centres of academic excellence.

h) The Countrywide Classroom Programme of the Commission has effectively utilised the TV network to take high quality university-level education to rural, semi-urban and even the remotest parts of the country. More than three-fourth of the programmes telecast are from Indian sources.

i) Women's studies programmes have been incorporated in the university system with the objective of utilising women's full potential as human resource for national development and changing the present attitude and values in society regarding women's role and rights.

Within the broad components mentioned above, the thrust areas pursued during the year 1990-91 have been as follows:

1. **Inter-University Centres and Consortiums.**
2. **Distance** Education.
3. Academic Staff Colleges for orientation of teachers.
4. Alternative models of management focussing on aspects like university autonomy, accountability, planning, funds and inter-relationship between university, state government and the UGC.
5. Special Assistance Programmes.
6. Eligibility test for recruitment of lecturers.
7. Strengthening the infrastructure of science and technology by bringing in more departments for support.
8. Superconductivity and condensed matter science.
9. Adult Education and the National Literacy Mission.
10. Enhanced facilities for scheduled castes/tribes, minorities and women.

11. Fellowships/scholarships.

12. Spread of mass communication and educational technology network.

Also, during the year, the Commission circulated guidelines for development of colleges during the Eighth Plan period and laid down fresh guidelines for schemes like Teacher Fellowship, Unassigned Grants, Planning Forums and Preparation of University Level Books by Indian Authors. The Commission also added another dimension to its commitment towards the society by creating positions of "Visiting Faculty" in the universities so as to provide teaching/ research assignments to the teachers from Kashmir University and its affiliated colleges.

Future Projections : In the guidelines for the Eighth Plan development schemes circulated to universities, the Commission has identified the following priorities for the university system in the coming five years:

i) Existing departments of the universities may be oriented to provide a better climate for teaching and research and to make extension an integral component of education.

ii) It is necessary to modernise the courses giving specific orientation for the purpose of making them relevant to regional and national development.

iii) Specialised courses or areas of study in the existing departments as well as on an inter-departmental basis which would also warrant curriculum innovations, restructuring of courses at undergraduate and post-graduate levels to link them better with societal needs and various development sectors including rural and agricultural.

iv) Laboratory and library facilities and services and workshop facilities, central instrumentation and maintenance of equipment may be upgraded.

v) Additional academic staff requirement to meet the growing needs, keeping in view full utilization of existing staff positions may only be considered.

vi) Facilities including services like water supply and electricity on the campus for supporting various academic activities may be given due importance.

vii) Teaching aids may be provided to all the departments. Libraries should be transformed into information centres and steps be taken to link the library with various departments through modern communication technology. Library services be strengthened to extend its access with a view to making it whole-day institution working with modern facilities including computer search and documentation services.

viii) Infrastructural gaps in academic buildings and laboratory equipment may be appropriately bridged keeping in view the optimal use of such facilities.

ix) Common facilities for students including counselling services and linkage with appropriate employment agencies may be improved.

Similarly, the Commission's policy for the development of colleges during the Eighth Plan will have four main planks viz;

(a) Improvement of standards and quality of education,

(b) Removal of disparities and regional imbalances in higher education facilities,

(c) Restructuring and diversification of courses, and

(d) Granting of autonomous status to deserving colleges.

To achieve these objectives, the Commission will provide assistance to the colleges which fulfil minimum eligibility conditions and have the necessary viability and potential and are striving for better standards to enable them to meet their basic needs like books and journals including strengthening of book banks, basic scientific equipment needed for proper instructions at undergraduate level, construction of buildings, teaching and technical staff, remedial courses for the students belonging to the weaker sections of the society, extension programme, examination reforms and participation of teachers in academic conferences, workshops/seminars in India. With a view to removing disparities and regional imbalances, assistance will also be provided to the colleges catering to the needs of Scheduled Caste and Scheduled Tribe students and for intensive development of colleges situated in backward/rural/ border areas.

SECTION - 1

GROWTH OF INSTITUTIONS, ENROLMENT AND FACULTY

1.01 Higher education system in India has been under considerable stress in the past decade due to the challenges offered by increase in numbers on the one hand and the need to maintain standards on the other. Higher education in recent years is being looked upon, particularly by the weaker sections, as the only means to vertical, social and economic mobility. To meet these aspirations, colossal investment is needed in higher education to ensure that institutions of higher education are equipped with a certain minimum of facilities by way of physical infrastructure,technical and research support and resources for purchase of equipment,books etc. Despite the constraint of resources, it has been the endeavour of the Commission to provide the necessary facilities so as to strike a balance between the conflicting demands of quality and quantity in the higher education system.

This section of the report presents in numerical terms the higher education scenario of the country over the past decade as reflected by the growth in enrolment, staff and the number of institutions.

1.02 **New Universities**

During the year 1990-91, the following university was set up viz.,

North Maharashtra University, Jalgaon.

Thus, the total number of universities as on 31st March,1991 stood at 147.

1.03 **Universities declared fit to receive Central Assistance**

The following university viz., Amravati University (Amravati) was declared fit to receive central assistance including assistance for institutional development in terms of the rules framed under section 12(B) of the UGC Act.

1.04 **New Institutions Deemed to be Universities under Section 3 of the UGC Act**

During the year, the Government of India, on the recommendations of the UGC, declared the following institution as institution deemed to be university under Section 3 of the UGC Act.

- Jain Vishwa Bharati Institute, Ladnun (Rajasthan).

With this, the total number of institutions deemed to be universities increased to 29 as on 31st March, 1991. A chronological list of universities, institutions deemed to be universities and institutes set up under Acts of State Legislature is given in *Appendix-I.*

1.05 **Colleges Under Section 2(f)**

At the end of 1990-91, 4210 colleges including postgraduate colleges had been included in the list maintained under Section 2(f) of the UGC Act.

1.06 Student Enrolment

In terms of absolute numbers, there has been a consistent increase in enrolment as well as institutions over the years as reflected in table 1.1 below. It will be seen that in 1981-82, the number of students enrolled was 29.52 lakhs spread over 118 universities, 13 institutions deemed to be universities and 4886 colleges whereas in 1990-91 there were as many as 44.25 lakh students enrolled in 147 universities, 29 institutions deemed to be universities and 7121 colleges.

Table 1.1

Year	Number of universities	Number of Colleges*	Number of Students
1981-82	118 + 13 institutions deemed to be universities	4,886	29,52,066
1982-83	120 + 13 institutions deemed to be universities	5,039	31,33,093
1983-84	124 + 15 institutions deemed to be universities	5,246	33,22,939
1984-85	125 + 15 institutions deemed to be universities	5,590	34,04,096
1985-86	132 + 17 institutions deemed to be universities	5,816	36,05,029
1986-87	136 + 19 institutions deemed to be universities	6,512	37,54,409**
1987-88	142 + 22 institutions deemed to be universities	6,685	39,10,828**
1988-89	144 + 25 institutions deemed to be universities	6,779	40,74,676**
1989-90	146 + 28 institutions deemed to be universities	6,942 #	42,46,878**
1990-91	147 + 29 institutions deemed to be universities	7,121 #	44,25,247**

* Excludes junior colleges and those offering diploma/certificate courses.
\# Provisional
** Estimates

1.07 Growth Rate of Enrolment

The growth of student enrolment in the university system over a 20-year period from 1971-72 to 1990-91 is given in *Appendix-II*. The average decadal growth rate of enrolment during 1981-82 to 1990-91 was close to 4.9 per cent as compared to 3.5 per cent recorded in the earlier decade viz.1971-72 to 1980-81. A look at the year-wise growth rate of enrolment during the ten-year period 1981-82 to 1990-91 also brings out that the growth rate, having reached the highest level at 7.3 per cent in 1981-82 started declining till it reached a low of a mere 2.9 per cent in 1984-85. Thereafter it picked upto 5.9 per cent in 1985-86 and stabilised around 4 per cent from 1986-87 to 1990-91. The all-India average annual compound rate of growth of enrolment during the five-year period 1986-87 to 1990-91 was 4.2 per cent as indicated in *Appendix-III*. It will also be seen from the appendix that there were wide deviations from this average growth rate among different States. Tamil Nadu, for instance, recorded an average annual compound rate of growth of enrolment of 9.3 per cent during the period while Orissa recorded a mere 2.9 per cent. As many as 14 States had average growth rates lower than the all-India average of 4.2 per cent during 1986-87 to 1990-91.

1.08 Stage-wise Enrolment

Stage-wise enrolment at the graduate, post-graduate, research and diploma/certificate levels during 1986-87 to 1990-91 given in *Appendix-IV* shows that percentage enrolment at these different levels in 1990-91 was the same as it was in 1989-90.

Over the five-year period also, percentage of enrolment at the graduate, post-graduate/ research and diploma/certificate levels has remained almost the same in each year viz. 88.1 per cent, 10.6 per cent and 1.3 per cent respectively.

Appendix-V gives stage-wise enrolment separately in the university departments/university colleges and affiliated colleges during the four-year period from 1987-88 to 1990- 91. It will be seen that enrolment in the affiliated colleges as percentage of total enrolment for all the stages taken together remained in the vicinity of 83 per cent in each of these years. Stage-wise enrolment in the affiliated colleges accounted for nearly 88 per cent of the total enrolment at the graduate level, 57 per cent at the post-graduate level, 15 per cent at the research level and 44 per cent at the diploma/certificate level during 1990-91. The remaining enrolment at these different levels was accounted for by the university departments/university colleges. The position in the earlier years was almost the same.

1.09 Faculty-wise Enrolment

Faculty-wise distribution of student enrolment for the five-year period 1986-87 to 1990-91 given in *Appendix-VI* shows enrolment in each faculty as a percentage of total enrolment in all the faculties taken together. It will be seen that enrolment in the faculty of Arts (including Oriental Learning) has been the highest as percentage of total enrolment in each year, followed by the faculty of Commerce, Science and Law in that order. Year to year variations in the percentage of enrolment in each faculty to total enrolment in all the faculties taken together have been of a very marginal nature. For example, enrolment in the faculty of Arts has been 40.4 per cent in each of the five years from 1986-87 to 1990-91. Similarly, in the

faculty of Commerce, the enrolment percentage has remained 21.9 per cent for all the five years from 1986-87 to 1990-91. Similarly, percentage share of the faculty of Science remained constant at 19.6 during the five-year period. Enrolment trends in other faculties present a similar picture except that percentage shares of these faculties in total enrolment have been far too small as compared to the faculties of Arts, Commerce and Science.

1.10 Establishment of New Colleges

The number of new colleges set up during 1990-91 was 179, thus raising the total number of affiliated colleges to 7121 in 1990-91 as compared to 6942 colleges in 1989-90 *(Appendix-VII)*. Of the 179 newly established colleges, 99 were arts/science/commerce colleges. The remaining were professional colleges belonging to different faculties as follows :

Physical Education and Education (37), Medicine/ Pharmacy/ Ayurveda/ Nursing/Dentistry/Homoeopathic (17) Engineering/Technology (9), Agriculture (9) and Law (8).

1.11 State-wise Growth of Colleges

State-wise distribution of the newly established colleges during the period 1986-87 to 1990-91 is given in *Appendix-VIII*. The number of colleges in the country increased by 609 during this period. The highest increase during this period was recorded in the State of Maharashtra (128). Other States where the increase was substantial were Andhra Pradesh (93), Karnataka (82) and Madhya Pradesh (62).

These four states among them accounted for nearly 60 per cent of the increase in the total number of colleges during the period. Increase in the number of colleges in some of the other states was negligible while in some it was not substantial. It will also be seen *(Appendix-IX)* that out of a total increase of 609 in the number of colleges during 1986-87 to 1990-91, increase in the number of arts/ science/commerce colleges was 387, accounting for nearly 65 per cent of the total increase.

1.12 Staff Strength

Appendix-X shows the strength and distribution of teaching staff in the university departments/university colleges during the period 1986-87 to 1990-91. In 1990-91, there were 58,661 teachers in the university departments/university colleges. Out of these, 7509 were professors, 15369 readers, 33437 lecturers and 2346 tutors and demonstrators. The percentage of senior teachers viz. professors and readers to the total teaching staff has been in the vicinity of 39 per cent from 1986-87 to 1990- 91. Teaching staff in the university departments/university colleges increased by 1929 in the year 1990-91 as compared to an increase of 1759 in 1989-90 over the preceding year. Teaching staff in the affiliated colleges *(Appendix-XI)* totalled 2,04,464 in 1990-91 which included 28421 senior teachers, 1,67,047 lecturers and 8,996 tutors and demonstrators. There was an increase of 5,129 in the total staff strength in the affiliated colleges in 1990-91 over the year 1989-90 as compared to an increase of 5240 in 1989-90 over 1988-89.

1.13 Doctorate Degrees Awarded

The faculty-wise position of doctorate degrees awarded during 1985-86 to 1989-90 is given in *Appendix-XII*. It will be seen that the number of doctorate degrees awarded was on the increase, year after year, during this period except in 1986-87 when the number declined. In the year 1989-90, the number was 8521 for all the faculties taken together. The faculty-wise position shows that the faculty of Arts recorded the highest number of doctorate degrees awarded during this period followed closely by the faculty of Science. The faculty of Agriculture ranked a distant third followed by the faculty of Commerce. In the year 1989-90, as many as 3375 doctorate degrees were awarded in the faculty of Arts while 3110 were awarded in the faculty of Science. The position in other faculties was as follows:

Agriculture (807), Commerce (383), Education (249), Engineering/Technology (233), Veterinary Science (132) and Medicine (90). The number in the faculty of 'Others' consisting of Fine Arts etc. was 98. The faculty of Law had the lowest turnout of 44 only.

SECTION-2

INTER-UNIVERSITY CENTRES AND INFORMATION CENTRES

2.01 During recent years, the Commission has taken initiative in setting up Inter-University Centres in different areas with the objective of providing national research facilities within the university system. The Nuclear Science Centre at the Jawaharlal Nehru University Campus was the first such centre set up in 1984. Subsequently the Inter-University Centre in Astronomy and Astro-Physics was set up at Poona University in 1988 and the Inter-University Consortium at Indore in 1989. It is with the help of such centres that the Commission has been able to provide experimental facilities under one roof, otherwise it would be difficult to provide these facilities to various universities individually and separately. These centres are autonomous and established under Section 12 (CCC) of the UGC Act. A brief account of the progress and activities of the various centres during 1990-91 is given below:

2.02 **Nuclear Science Centre, New Delhi**

The Nuclear Science Centre, set up in 1984, aims to provide research facilities in the university sector for accelerator-oriented research in various fields such as Atomic Physics, Condensed Matter Physics, Nuclear Chemistry, Bio-Sciences and various allied areas besides the fundamental Nuclear Physics. It will be connected with the universities and other teaching institutions to provide a balanced man-power growth, both scientific and technical. The main facility in this centre in its first phase is a 15 million volt tandem accelerator. Equipped with a 380 KV injector with three changeable ion sources and nano-second light and heavy ion pulsing system, 15 UD Pelletron provides a versatile ion accelerator capable of accelerating almost any ion across the periodic table from proton to uranium to energies upto 200 mew. The first phase of the Centre as envisaged in the project report has been completed. The beam line was made available on 18th December, 1990. The accelerator was commissioned and dedicated to the nation by the then Union Minister of Human Resourece Development on 18th December, 1990.

Series of performance, demostration tests of the Pelletron have been conducted for various ions at different energies. Protons, alpha particles, nickel and Iodine ions were accelerated in these tests. The accelerator was tested both for continuous beams and pulsed beams. The pulse width of better than 1 nanosecond for protons and less than 3 nano seconds with heavy Ions were obtained. During this period, preliminary experiments were done by some users.

First experimental cycle as per the beam time allotment by Accelerator Users Committee got underway on July 8, 1990. In the first cycle of experiments, the Pelletron was utilised by the users from Pune, Chandigarh, Amritsar, Delhi, Kurukshetra, Waltair, JNU, NPL, Varanasi and Bombay.

The first phase of special projects sanctioned by the commission viz., Heavy Ion Reaction Analyser (HIRA), Gamma Detector Array (GDA) and the Scattering Chamber is nearly complete. All the components of HIRA viz., electrostatic deflectors, magnetic dipole, quadrupole etc. have been installed on the rotating platform and aligned. One of the electrostatic deflectors is completely conditioned upto 450 KV. The other is being conditioned. A special high vacuum sliding seal chamber is ready and is being tested. The entire scattering chamber will soon be tested with alpha particles. GDA beam line is completed alongwith detector mount and associated electronics. A number of indigenous modules have been fabricated for supplementing the GDA electronics. First ion beam test of GDA was performed. In this experiment there was participation from Delhi, Chandigarh, Varanasi & Bombay universities. A large 1.6m diameter scattering chamber designed by the Centre in collaboration with Bangalore University was indigenously fabricated. It is now installed, aligned and being used as a general purpose vacuum chamber for experiment.

A project submitted to the Department of Science & Technology for funding material science beam line is now approved. The beam line development programme will commence as soon as funds are released. In the meanwhile, a small muultipurpose chamber was fabricated in the Centre and installed on one beam line which is being provided to the users of Material Science for performing preliminary measurements before the dedicated beam line is commissioned.

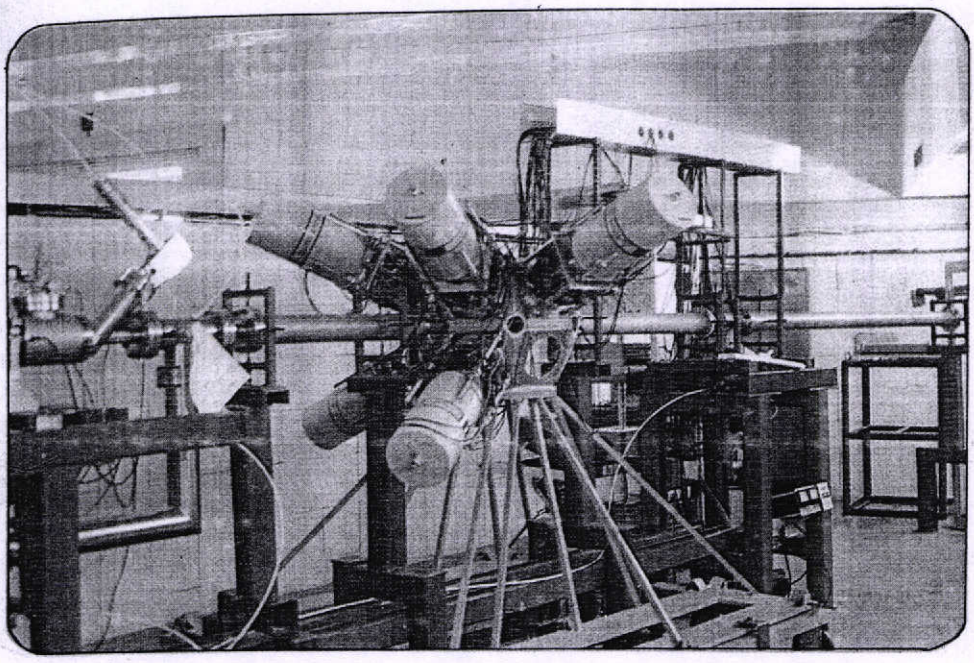
A small project is initiated to do some pilot measurements to study the effect of heavy ions of yeast cells. The building lay out for Phase II to accommodate the superconducting Linac module and the future beam hall alongwith other buildings is already aproved by the Urban Arts Commission. The construction work has commenced. A superconducting solenoid magnet is being made in collaboration with NPL, New Delhi. Some work is initiated in the area of high frequency electronics for the Phase II accelerator augmentation.

Students of M.Sc. from various universities and post graduate colleges are invited for a two-week project work at the Centre. This facility is being widely used.

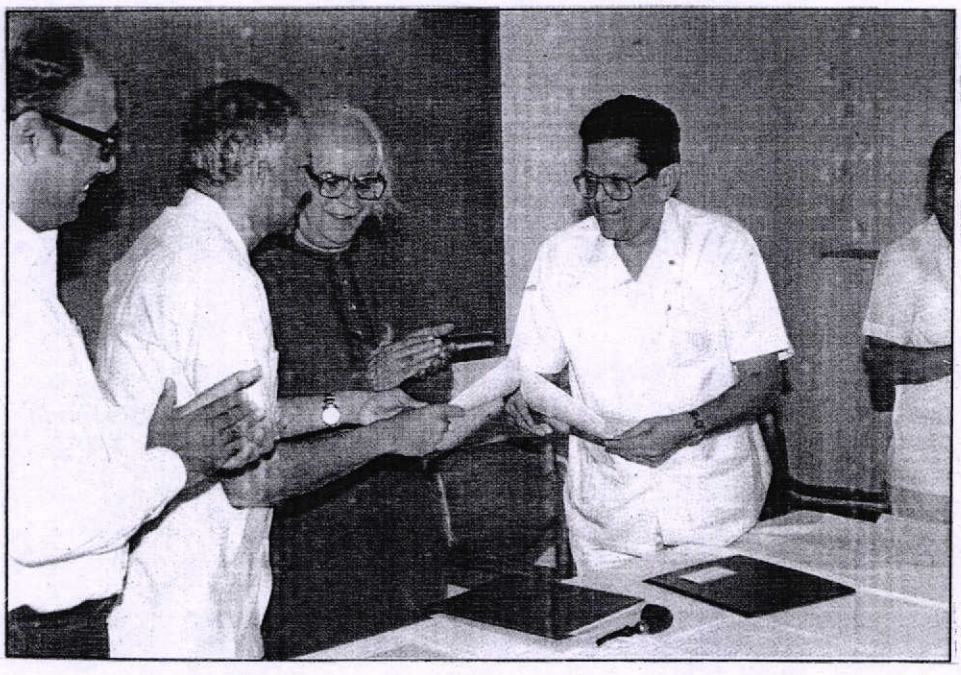
The Centre has organised various workshops for the users in different disciplines.

2.03 Inter-University Centre for Astronomy and Astro-Physics, Poona University Campus

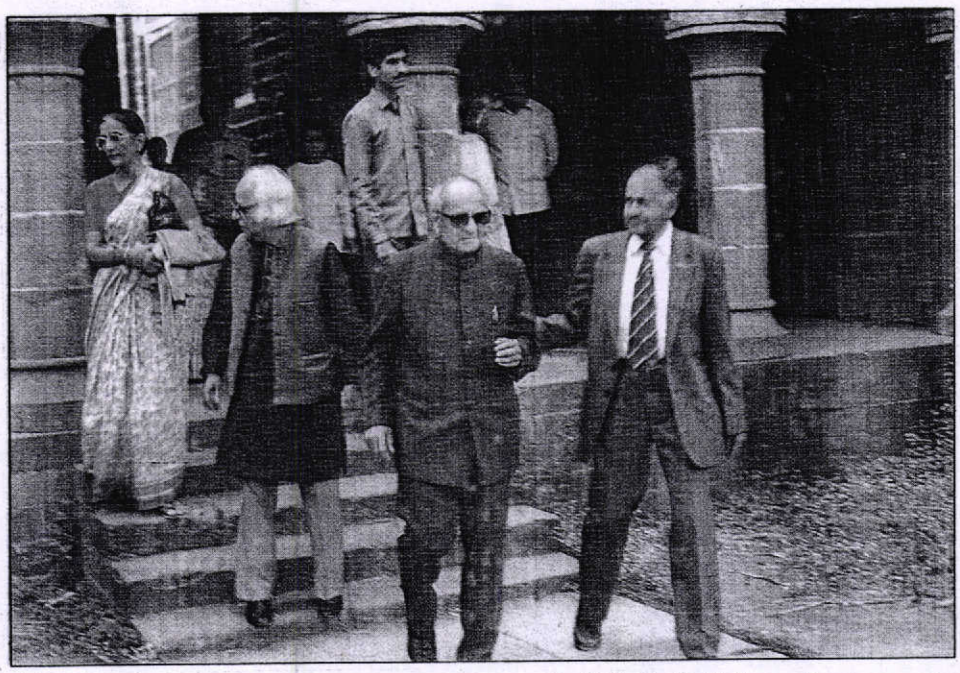
The centre has been functioning as an autonomous institution since December, 1988. Its main objectives are to provide a Centre of excellence for teaching, research and development in Astronomy and Astrophysics as well as to promote nucleation and growth of active groups in this area in the university system. Besides conducting vigorous research programme of its own, the centre will provide the academics from universities an access to state of the art astronomical instrumentation, theroretical know-how, well-equipped electronics laboratories, an excellent library, data centre and high quality computing facilities. The centre will actively cooperate with universities in initiating and strengthening teaching and research in Astronomy and Astro-Physics in the universities.



Gamma Detector Array (GDA), Nuclear Science Centre, JNU Campus, New Delhi



MOU Signing between Inter-University Centre in Astronomy & Astro-Physics and University of Poona



Second IUCCA Foundation Day Lecture by Shri P. N. Haksar, Poona

To achieve these objectives the IUCAA is functioning on several different fronts as given below :

i) The IUCAA faculty participates in teaching at the M.Sc. level in Physics and Astrophysics, and provides guidance to research students for Ph.D degree in Astronomy and Astro-Physics in collaboration with various universities.

ii) It coordinates participation of the academic community in major programmes in this field.

iii) It arranges refresher courses as well as advanced level schools and workshops in topics of current research.

iv) It takes up programmes for science popularization and fosters collaborative research projects between groups in universities, IITs and other similar groups in India and abroad.

The IUCAA has completed its third year and grown on all fronts. The Akashganga Complex of IUCAA, which is a housing colony of the Centre, is nearing completion. The academic and administrative offices aswell as the library have been equipped with computers installed there. Shri P.N.Haksar delivered the second Foundation Day Lecture on "India and the World :Some Reflections" on 29th December, 1990. Khagol, the IUCAA bulletin, has been brought out regularly every quarter and gained favourable comments.

The IUCAA also served as a foster mother for INFLIBNET - a far reaching new scheme of the UGC of an inter-library network using satellite communication technology.

2.04 Inter University Consortium, Indore

The Inter-University Consortium for DAE facilities (IUC- DAEF) was set up in 1989 with the aim of promoting interaction between the university and the DAE personnel. The DAE has set up major facilities like the Dhruva reactor at Trombay, and the Variable Energy Cyclotron at Calcutta. At the CAT (Centre for Advanced Technology), a synchrotron radiation source is in the process of being constructed. The IUC-DAEF is to promote the use of these facilities by the university scholars. The IUC-DAEF is also expected to organize workshops on advanced current topics for the benefit of the personnel from various scientific institutions.

The IUC-DAEF was registered as an autonomous society under the Madhya Preadesh Society Registration Act No. 44 of 1973. It has started functioning from a part of a building acquired from the Devi Ahilya University, Indore.

The following items of capital equipment have been received by the Consortium:

1) A rotating anode X-ray Generator (12 KW) from Rigaku,Japan, with two windows. An EXAFS equipment will be set up at one of the windows.

2) An ESCA equipment from VSW; UK for UPS, XPS and Auger spectroscopy.

In addition a turbo-molecular pump assembly from Balzers, UHV vacuum chamber, flanges and feed-throughs from VSW have been received for the facbrication of a photoelectron spectrometer.

The equipment will be commissioned as soon as the infrastructural facilities like the chilled water plan and servocontrolled voltage stablizers are ready.

A fully computerised laboratory EXAFS spectrometer of linear type employing bent ground focussing and analysing crystals in the Johansson mode has been successfully developed and fabricated. The spectrometer employs linear optical encoders and is software driven for translational accuracies of 5 microns. A resolution of 8 eV at Cuk has been achieved. This will be installed at the IUC laboratories.

A photoelectron spectrometer is being developed by Dr. Pimpale (IUC), Dr. Chaudhari, Pune and Dr. Sapre of the Nagpur University for the IUC. The design of a rotating anode soft X-ray source has also been completed by Prof. V.G. Bhide and his collaborators.

A Project leaders' workshop was held at VECC, Calcutta from 24-26th July, 1990. Fifty participants from various universities, Department of Atomic Energy, TIFR etc. participated. Thirty project leaders presented their research projects which were discussed in details. The following six groups were constituted to review the current studies in the respective area and to formulate research programmes in which a number of research workers can participate in a co-operative manner :

1) Pre-equilibrium phenomena

2) Charged Particle Reactions

3) High Spin nuclear structure Gamma ray spectroscopy

4) Fission Physics

5) Materials Science

6) Nuclear Chemistry.

Some of these groups have met and submitted their reports. Follow-up action to establish target, detector and electronics laboratories is under way.

A two-day workshop to discuss, evaluate and finalise the design of the two beam lines, one for X-ray and UV Photoelectron spectroscopy and the other for soft X-ray absorption studies was held in Indore during 26-27 June, 1990. The workshop was inaugurated by Prof. Yash Pal and attended by about fifty participants from BARC, CAT, IIT's and various universities. The optical lay-out for the two beam lines has been made and described in the December 1990 issue of Sahayog, the newsletter of the IUC.

A meeting of the project leaders was held on 29th October, 1990 at BARC to discuss the IUC projects on Dhruva and evolve the methodology of funding these projects. Each project was presented and discussed and 13 projects were approved.

A 200 KVA transformer has been installed and commissioned so that proper supply voltage and power will be available to the equipment. Servocontrolled three-phase voltage stablizers free of spiking have been installed.

A-5 ton chilled water unit for the rotating anode X-ray generator and ESCA equipment has been purchased.

Four computers have been purchased and commissioned for data analysis, data acquisition and office automation.

2.05 **Crystal Growth Centre, Anna University, Madras**

The Crystal Growth Centre has done extensive research in various aspects of Crystal growth which have been responsible for 14 original research papers in international journals and 37 papers in the national/international conferences. Five Ph.D. theses have been completed during the period under review. Industrially and technologically important crystals like GaAs, InP have been grown. Also single crystals in 2" diameter and 3" lang of III-V compounds have been grown. India has become the eighth country to have acquired this capability. All the auxilliary systems for the imported puller have been designed and fabricated indigenously. 31 visitors have visited the Centre from all over the country and got training in the area of Crystal growth.

Ministry of Human Resource Development, Government of India has sanctioned two projects on "Development of facilities for Photonic Devices with emphasis on Epitaxy of Semiconductor Materials" and "Development of Opto Electronic and Laser Crystals and Characterisation for Advanced Technology" with financial assistance of Rs. 17 lakhs and five lakhs respectively. Department of Science and Technology, Government of India has approved the research project on "Growth and Characterisation of Large size urea crystals of Optical quality" with assistance of Rs. 3.56 lakhs.

The University Grants Commission has approved Rs. 150 lakhs towards the activities of "Crystal Growth Centre :UGCAnna University facility". A national seminar on the Crystal growth of High Tc Superconductors was organised by the Crystal Growth Centre, Anna University during May 17- 18, 1990. About 60 participants from all over the country attended and 25 research papers were presented in the seminar. The seminar mainly focussed on the growth of superconducting materials and on the investigations of physical properties of high Tc single crystals.

One research scholar of Crystal Growth Centre attended "64th Colloid and Surface Science Symposium and Nucleation Symposium" held at Lehigh University, USA during June 18-20, 1990 and presented a research paper. He also attended "VIII American Conference on Crystal Growth" at Vail, USA during July 15-20, 1990.

Several distinguished foreign visitors like Prof. C.N.Alexandrov, Doctor of Physics and Mathematics, Chairman of Scientific Council on Thin Film Growth Processes, Institute of Semicondoctor Physics, Academy of Sciences of the USSR, Novosibirsk, USSR: Dr. Rajendran, Nobil Solar, USA; Prof. Osman A. Shinaishin NSF, USA and others have visited the Centre.

Three researchers of the Centre had been invited to present their contributions in the Eighth colloquium for Young Physicists organised by the Indian Physical Society, Calcutta during 23-24 August, 1990. The Centre has the unique distinction of participation in this annual national programme year after year from the inception of the programme.

The researchers of Crystal Growth Centre have visited the national laboratories like the National Physical Laboratory, New Delhi, Solid State Physics Laboratory, New Delhi, Tata Institute of Fundamental Research, Bombay, Bhabha Atomic Research Centre, Bombay, Saha Institute of Nuclear Physics, Calcutta, CECRI, Karaikudi and Indira Gandhi Centre for Atomic Research, Kalpakkam in connection with the field work and the characterization of the crystals grown at Crystal Growth Centre.

2.06 Western Regional Instrumentation Centre, Bombay

In the year 1989, the Commission decided to upgrade the existing Western Regional Instrumentation Centre at Bombay university to the status of an Inter University Centre in Instrumentation.

The Centre would provide a range of training programmes for the staff of the University Science Instrumentation Centres and to develop instrumentation required for teaching and research. The Centre will have specific responsibility of developing instruments for R & D teaching, training of suitable manpower at all levels in the university sector through proper networking of the universities and collaborating with national laboratories and the instrument industries. The Centre will function as a nodal institution in the university sector to provide the necessary linkage between universities and the national laboratories and industries with a view to bring together their expertise in instrumentation for improving the level of instrumentation at universities. It will provide for suitable mechanism of collaboration between the universities, national laboratories and industries to ensure that the research, design and development of instrumentation at the Centre would result in their prompt production.

The proposed Centre will have the following objectives :

(i) Training of USIC staff and students for proper use and maintenance of instruments.

(ii) Teaching of instrumentation at postgraduate and doctoral level for students and USIC senior staff.

(iii) Conducting advanced study programmes such as refresher courses, workshops, seminars, etc. for teachers, research workers from universities, national laboratories and industry.

(iv) Development of scientific instruments of direct relevance to teaching and research in universities and colleges and dissemination of the know how available to industry for production.

(v) Development of state-of-the-art production-worthy instruments for scientific research, based on high technology using collaborative means between universities, national laboratories and industry.

(vi) Development of instruments required to support national technological missions undertaken by the universities.

The Project report and Memorandum of Association of the proposed Centre have since been approved by the Government of India. The modalities are yet to be finalised with the university of Bombay,

2.07 Inter-University Consortium for Educational Communication: (A Project Mode of Nuclear Science Centre)

Communication is a very important educational process. With expanding frontiers of communication technology over large areas and regions, mass communication is assuming greater and greater importance. The challenges of modernisation and development in the underdeveloped, less developed as well as developing areas and communities can be better met if communication processes are handled efficiently. Mass communicationn has a big role to play in education at all the levels including non-formal and social education, open and distance education. The vast fields of enterprise such as agriculture, industry and health stand to benefit by the use of mass media. So are the women and children who can be reached more through the radio and TV than through formal educational institutions. Remote rural areas can be reached with needed informational inputs through distance media like TV in the absence of needed literacy. The quality of education imparted to all, urban and rural audiences, would become equal. As immense audiences are covered through this media, the cost per learner becomes lower.

The communication technology is becoming more and more powerful in view of the information systems developing in response to national needs. Media activities have become diversified and varied. The University Grants Commission was quick to realise the potential use of a National Satellite System for making high quality educational material available to students and the citizens of the country. Therefore, as soon as it became clear that the country was planning to have an INSAT system, the UGC took initiative to ensure that some time-slot was made for higher education on this system, and it took steps for the creation of an infrastructure for generating educational TV programmes to meet the requirements of this slot.

As a result of the efforts made by UGC, two one-hour slots were earmarked six days a week for the transmission of higher educational programmes on the national network. The Countrywide Classroom transmissions began on August 15, 1984.

The UGC set up a task force to define the infrastructure required for producing television programmes. The task force recommended the creation of Educational Media Research Centres (EMRCs) and Audio Visual Research Centres (AVRCs) in the universities. It also recommended the creation of a national centre to coordinate this activity. For coordination of the EMRC's and to liaise with Doordarshan, an INSAT Cell was created within the UGC.

The UGC started with the setting up of four EMRCs and three AVRCs. This infrastructure was of course not adequate to meet all the requirements, and therefore some programmes had to be imported. However, the infrastructure was kept to a minimum to begin with, to gain experience with the system. This infrastructure gradually came into being and became operational. Its increase of expertise, facilities and improved management has led to greater indigenous contribution to the transmission requirements resulting in the reduction of imported programmes.

As more experience was gained, a few more AVRC's were set up, and now a total of four EMRCs and ten AVRCs form part of the 'Country-wide Classroom' system.

The 'Country-wide Classroom' has amply demonstrated its effectiveness over the years. It has not only fulfilled the transmission requirements, but has shown a definite positive direction in improvement of quality. The feedback indicates that the transmission has served the purpose of carrying multidisciplinary educational information to all sections of society.

The EMRCs and AVRCs in collaboration with a few other agencies are working in their own way to meet the communication needs of the day. The INSAT Cell is playing nodal role in coordinating the activities of EMRCs/AVRCs and with Doordarshan. Communication departments in several universities are imparting education in communication at the undergraduate and post-graduate levels. All these efforts need coordination and streamlining so as to avoid duplication. The activities of various departments of communication, the EMRCs and AVRCs can be strengthened if an Inter-University Consortium is created.

The Inter-University Consortium for Educational Communication will address itself to the media needs of education in the country by promoting the growth of an audio-visual culture and by configuring new communication technologies in the spread of education.

2.08 MST Radar Centre - Sri Venkateswara University

The Commission has also set up a Centre within the university system at Sri Venkateswara University. The Centre is called MST Radar Centre. The Mesosphere, Stratosphere and Troposphere (MST) Radar System is coming up near Tirupati. This is an important national facility being created jointly by DOS, DST and others. The S.V.University is the nearest university located from this MST Radar facility and is ideally suited for scientific research. To take advantage of this, the University Grants Commission decided to create a MST Radar Centre at S.V.University to utilize the MST Radar facilities and take this up initially for a period

of five years. An MOU has been signed with the S.V. University. The following are the objectives of the Centre:

1. The Centre shall be accessible to scientists and researchers from Indian universities working in the area of atmospheric sciences especially with reference to MST Radar related area.

2. It will provide necessary facilities for research and basic computational and other support for carrying out such research.

3. It will provide a forum for exchange of visits in the area of Atmospheric and Geosciences so that the Indian atmospheric science community will benefit from such co- operation.

4. It will help in training PG students and research fellows in a number of challenging tasks in the thrust area.

5. The Centre will help in co-ordinating the experimental programme in the area of atmospheric dynamics using MST Radar and other instrumentation facilities.

6. **It will organize a comprehensive national data and help in generation and updating models for the middle atmosphere over Indian latitudes.**

The University Grants Commission will provide funds for infrastructural facilities for recurring expenditure and for visitors programmes for realising the objectives of the Centre.

2.09 Science Information Centre, Indian Institute of Science, Bangalore

The Centre has been providing authentic and up-to-date abstracting services in disciplines like Physics, Biological Sciences, Chemistry, Mathematics, Earth Sciences and Engineering.

It provides to the users full-length photo-copies of current papers and educates them in generating queries relevant to their requirements to ensure optimal utilisation of the information services. A computerised management system streamlines the journal procurement, follow up, renewal, receipt etc. for journals received in the Centre.

The Centre also runs a training programme of one-year duration to provide adequate knowledge of computers and Information technology applications.

2.10 Information Centres in Humanities and Social Sciences, MS University, Baroda and SNDT Women's University, Bombay

The Commission has set up two Information Centres in the disciplines of humanities and social sciences, one at the SNDT Women's University, Bombay and the other at the MS University, Baroda. The SNDT Centre covers disciplines like Sociology, Gujarati, Women's Studies, Home Sicence, Library Science and Special Education while the Centre at the MS University of Baroda covers Economics, Political Science, Education and Psychology.

The Centres have been actively engaged in providing current awareness/information services, reference services, information access to teachers and students, bibliographic support and latest documentation in the respective disciplines.

Resources available in university libraries are optimally utilised and services are developed on a computational data base built up by scanning hundreds of Indian and foreign journals at these centres.

2.11 Information and Library Network (INFLIBNET)

Effective dissemination of information among its populace is a major factor in the development of a nation. Libraries and information centres are the traditional but largest store houses of knowledge. INFLIBNET provides a mechanism to exploit this knowledge to the maximum by using appropriate information technologies of computers and communication to network libraries in the country so as to share the national resources towards optimum utilisation and to aviod duplications in holding to the extent possible.

It was reported last year that the Commission had received reports of the six task groups constituted by it to work out the finer details of the INFLIBNET programme so as to help the National Centre of INFLIBNET in implementing the programme.

Considering the limited resources available, a revised plan has been prepared for starting the INFLIBNET programme with initial investment of Rs.25 crores over a period of four years during the Eighth Plan. This reduction in cost has mainly been achieved by reducing the number of nodes in the network. The basic philosophy of INFLIBNET is to evolve an effective information transfer mechanism. The thrust of the plan is to improve the information flow from the information-rich to the information-poor institutions - poorer because of geographic location and/or resources.

It is planned to identify and modernise 45 university libraries, provide assistance to 10 Document Resource Centres and 5 R & D/Sectoral Information Centres. These nodes and the three already operational UGC National Information Centres will be linked via a satellite. Emphasis will be given to libraries from remote areas which are poor in terms of collection and resources. This will enable some of the deprived libraries to have access to the richer ones in the country which will bring about equity.

The objectives of the INFLIBNET are as follows:

i) To promote and establish communication facilities so as to improve capability in information transfer and access, that provide support to scholarship, learning, research and academic pursuit through cooperation and involvement of agencies concerned.

ii) To establish Information and Library Network 'INFLIBNET', a computer communication network, for linking libraries and information centres in universities, institutions of national importance, UGC information Centres, R & D institutions and colleges.

iii) To facilitate scientific communication amongst scientists, engineers, researchers, social scientists, academics, faculties and students through electronic mail, file transfer, computer/audio/video conferencing, etc.

iv) To provide advice, consultancy and services as needed for implementation and expansion of the 'Countrywide Classroom' to UGC, national and state level universities.

v) To undertake system design and studies in the field of communications, computer networking, information handling and data management to establish an efficient network and upgrade it in keeping with growing needs.

vi) To establish appropriate network control and monitoring systems for the NETWORK and organise maintenance.

Implementation of INFLIBNET project as presented in this initial plan will go a long way in vitalising the information transfer scenario in the country, with minimum possible investment. At the end of the four-year period a network of 60 nodes with a hub earth station will be established alongwith all its elements as proposed in the original plan. Since the scheme conceived is modular in nature, it will be possible to enhance the capability of this network to cover the entire country in the 9th plan period. The Centre in the project mode in the initial stages is being looked after by the Inter University Centre in Astronomy and Astrophysics, Pune and a Director for the Centre has since been appointed.

SECTION-3

HI-TECH AREAS AND R&D EFFORTS

3.01 Superconductivity Programme

The discovery of superconductivity at much higher temperatures (77K) in certain oxides since 1987 has brought many applications of superconductors within the realm of exploitation since the superconducting state can now be attained with the help of a much cheaper and abundantly available refrigerant-liquid nitrogen. The high-temperature superconductors (HTSC) discovered so far are all ceramic materials prepared by high temperature sintering of ceramic oxides, and are therefore, different in many aspects from the conventional metal/alloy low-temperature superconductors (LTSC). Consequently, the fabrication of HTSCs into technologically useful shapes such as wires, tapes or ribbons; the influence of their granular nature on the critical superconducting parameters; and their environmental degradation have posed entirely new fields for large scale applications.

In addition to critical temperature (Tc) and critical magnetic field (Hc), which are intrinsic characteristics of a superconductor, the superconducting state is also destroyed if the material carries a current density higher than a critical value, called the critical current density (Jc). Temperature, magnetic field and current density thus determine together whether a material would remain superconducting or not. The superconducting state thrives below and vanishes above a three-dimensional critical surface unique to each superconductor. In contrast to Tc and Hc, Jc of a superconductor can be controlled by metallurgical processing and by introducing defects in it. The new HTSC's have high Tc and Hc values but the Jc is very much dependent on the processing and fabrication conditions. Thus, the quality of a candidate superconductor will be assessed on the basis of how high is the (the higher the better) Tc.

Superconducting devices for most of the applications mentioned above were either already being used or under advanced stages of development as LTSC devises before the discovery of the new ceramic HTSC. But the use of liquid helium refrigerant has always been an obstacle, except in strategic areas where cost is not a constraint. The economy and convenience of HTSCs will put SC devices into mass-scale use over the coming years. Most technologists agree that if ceramics were found near room- termpature, they would provide far-reaching benefits to the society and would revolutionize modern technology. The existing HTSCs are facing some technical obstacles before being widely acceptable for use in practical SC devices.

Consequent upon intense R & D efforts in thin film development of HTSCs most of the thin film related problems such as low Jc or substrate interaction are either solved or are nearing solution. As thermal processes for making high quality HTSC thin films develop further their advantage in terms of high Jc and higher Tc will be translated into reliable and economic

devices. In this context, T1 based HTSC thin film devices appear to have a great future. Futuristic hybrid chips combining the best of the advantages of opto-micro and superconducting electronic technologies and MET (magnetic- field efect transistor) are examples of such HTSCs devices. Thin film devices are likely to hit the superconducting electronics scene very shortly.

Recently several important developments have taken place in this fast emerging area. The discovery of altogether new high temperature superconductors V-Sr-T1-O is unlike the previous HTSCs during 1987-89. In this case, there is no copper, the minimum market application is in HTSCs in passive microwave devices, superconducting Josephson HTSC switched delay lines, for active electronic warfare, etc form some of the examples of recent developments in HTSCs. It seems almost certain that in course of time HYSCs will become as important as semi-conductors in the present age and with continuing research efforts, HTSCs will make a wide impact on modern technology and society.

Keeping in view the importance of this fast emerging area, the Commission has been assisting the universities since 1987 in developing education and research capabilities - both basic and applied - in superconductivity. The results achieved upto the period ending **March, 1991 are summarised below:**

- **There are about 400 research publications in national and international journals of repute.**
- **The academic results achieved by 45% of Institutions are rated "very good", 35% "good" and 20% "satisfactory" as assessed by Experts.**
- 60% of Institutions are continuing cooperationwithin the institution, within the country & abroad.
- Their achievements have received recognition through national and international awards.
- 38 Ph.D./M.Phil have been produced.
- A number of institutions have introduced special courses at postgraduate level.
- 30 projects/funds were generated from other national/international agencies on the basis of their achievements.
- 20 conferences/seminars were organised to exchange ideas to generate importance and awareness in the field and to have mutual benefits.
- There are some immeasurable factors that have generated active interest and intensified R & D and educational activities in the university sector.

There is a Standing Committee which helps the Commission to implement the programme effectively in the university system. The Standing Committee reviewed the activities at its meeting held in February, 1991. It expressed satisfaction about the progress of the programme and appreciated the notable achievements both in basic research and in the applications of superconductivity. The cost effectiveness has been found quite high as far

as quantitative academic output is concerned. Some institutions have come up as centres of excellence in their specific areas of specialisation. They have developed active groups and have organised necessary activities as envisaged in original proposals. The programme has generated a positive impact on the university system for collaborative approaches to R & D and educational activities.

The Committee was of the view that a zero budget unregistered Consortium of universities may be established for effectively implementing the programme and overseeing its activities. This will facilitate complementary use of facilities and expertise among various institutions working in this field. A Coordination Committee has been constituted to look after the proposed Consortium.

3.02 Bio-technology(Deptt.of Biotechnology, Govt. of India- UGC Collaborative Programme)

A collaborative programme between the Department of Bio- Technology (DBT), Government of India and the UGC has been in operation since 1985-86 for strengthening teaching and training in Bio-technology on a selective basis in universities which have active research groups in the field. Six universities viz. Banaras Hindu, Jadavpur, Jawaharlal Nehru, Madurai Kamraj, M.S.University of Baroda and Poona, identified in this field, have since been conducting M.Sc./M.Tech. courses in Bio-technology for which the DBT is providing financial assistance by way of equipment, books and journals, contingent funds, academic staff salaries and studentships while the Commission pays salaries of administrative and technical suppoprting staff and a part of building construction cost. The Commission has also been providing two junior research fellowships at each centre for pursuing Ph.D. in Biotechnology. Also, the Commission provides assistance to the universities for organising workshops/seminars in Biotechnology.

3.03 Ocean Science and Technology

The Commission has been collaborating with the Department of Ocean Development (DOD), Government of India for promoting Ocean Science and Technology in the university sector. This collaboration and joint funding has helped particularly those universities located in coastal areas which have developed facilities and expertise to train necessary manpower for the user agencies and to advance the learning of marine sciences. Formulation of perspective plan in teaching, training and research in collaboration with other institutions has also been taken up as part of this programme.

3.04 Atmospheric Sciences

The programme, initiated in 1987-88, aims at promoting Meteorological and Atmospheric Sciences in the university system and providing employment opportunities for trained persons at the computer systems set up by the Council of Meteorological and Earth Sciences for medium range forecasting. For this purpose, post-M.Sc./M.Tech. and research level courses in Atmospheric Sciences have been initiated by the Commission in seven universities viz., Andhra, Calcutta,Cochin, Gujarat, Poona, Roorkee and the Indian Institute of Science, (Bangalore). These courses include Physical Meteorology, Fluid Mechanics, Dynamic

Meteorology, Air Pollution and Atmospheric Chemistry, Hydrometeorology, Numerical Weather Prediction, Non- Conventional Sources of Energy and Satellite Meteorology etc.

A Standing Committee headed by the Chairman, UGC assesses the progress of the programme from time to time.

3.05 Mass Communication and Educational Technology

(a) Country-wide Classroom Programmes

The University Grants Commission has been allocated two hours transmission time daily for six days a week from 1.00 to 2.00 p.m. and 4.00 to 5.00 p.m. for telecasting 'Country-wide Class-room' programmes relating to higher education. The programmes are essentially enrichment programmes meant to take education to remote, rural and backward areas of the country.

The programmes are produced by Media Centres which are of two types viz. Educational Media Research Centres (EMRCs) and Audio Visual Research Centres (AVRCs). During the year, the AVRCs at Jodhpur and Madurai Kamraj Universities and at the St. Zavier college, Calcutta were upgraded as EMRCs. Thus, at the end of March, 1991, there were seven EMRCs and seven AVRCs in different universities in different parts of the country. Out of these, the seven media centres and the UGC INSAT Unit are being maintained under Non-Plan with effect from 1.4.1990. The activities of the media centres are coordinated by the UGC INSAT project located at Jamia Millia Islamia. Nearly 2000 programmes have been produced by the media centres upto 31.3.1991. These programmes are in varied fields like Applied Sciences, Pure Sciences, Arts, Social Sciences, Languages and Literature, History and Geography, Philosophy and Psychology, Engineering, Technology and Medicine, etc.

The Commission has envisaged the establishment of six more media centres in different states during the Eighth Plan period. It is also proposed to telecast programmes in Hindi very soon. During the year 1990-91, 446 programmes of 9223 minutes duration were produced by different media centres. The subject-wise breakup of the programmes received from media centres is given at *Appendix-XIII*. This position is also reflected by way of a diagram given at the end of the report.

Appendix-XIV gives the programmes telecast from different sources i.e. media centres, other Indian sources and foreign sources. A chart showing this position is given at the end of the report.

b. Race to save the planet

The Commission, which was involved for the last two years in collaboration with a premier public broadcasting Coroporation, WGBH, Boston in producing a ten-part television series entitled 'Race to Save the Planet' telecast the series on Doordarshan network from 14th October, 1990 on sundays. The programmes of the series have been shot all over the world including the Antarctica. The series analyses and presents the most important dilemma of our times, viz. how to reconcile the urge of growth and development with the need to preserve

and improve the environment and enhance the quality of human living. The series also comes at a time when awareness of these problems is on the increase, both within the country and abroad. It also lends prespective to the story of the human happening on the planet and provides some wisdom to choose the specficities of our development agenda.

The Commission also undertook a project to produce non- broadcasting video lectures for undergraduate students. For this, 15 subjects were selected and the video course material is ready in eight subjects. The work in the remaining subjects is in progress.

A workshop for researchers was held at the AVRC, Madurai Kamraj University (later upgraded as EMRC) from Oct, 29 to Nov. 3, 1990.

3.06 **Film Study Centres**

The Commission has set up Film Study Centres in selected universities and colleges with the following objectives:

(i) To increase awareness of film as modern art form and of the cinema as a 20th Century medium of social communication and education by exposing students to international and Indian film classics of various forms in a systematic manner.

(ii) To organise discussions, symposia, lectures and publications on any aspect of film in support of the promotion of film culture on the compus.

(iii) To attempt to relate film as a subject with other subjects which are being studied on the campus and with the fine arts: and

(iv) To expand the understanding of the relationship of the cinema with the needs of individual's growth and social development.

Film study centres were functioning in 22 universities/ colleges as on 31st March, 1991. The working of these centres is under review.

3.07 **Pre-School T.V.**

The University Grants Commission is contemplating to produce and test a 13-episode educational TV series in Hindi for the Pre-school children. The programmes in each episode will be of approximately 30 minutes in length and will have a magazine format with modules involving the use of puppets, computer graphics, animation and children's activities with free module slots to accommodate other items of educational interest to children. The project has been sanctioned to Lady Irwin College, Delhi University from where it is being implemented. The project is expected to be completed in 1991.

3.08 Collaborative Programmes

(i) UGC-CSIR Collaboration

The University Grants Commission has signed a Memorandum of Understanding with the Council of Scientific and Industrial Research (CSIR) for research and development activities in the universities which will lead to betterment of each other's expertise and infrastructure, human resources development and exchange of ideas, concepts and techniques which will be of immense mutual benefit. In order to achieve these objectives, a joint coordination body has been set up to lay down the policy frame for the interaction, to approve joint major research and development programmes and to recommend to each other's respective organisations, the financial provisions that need to be made. A coordinator of the UGC-CSIR Interaction Programme has also since been appointed.

(ii) UGC - IIAS Collaboration

A Memorandum of Understanding between the UGC and the Indian Institute of Advanced Study, Shimla was signed by the Chairman of the UGC and the Chairman of the Governing body of IIAS on the occasion of the Silver Jubilee celebrations of the Indian Institute of Advanced Study on 15th January, 1991.

The purpose of establishing the Inter-University Centre for humanities and social sciences has been to promote interaction between teachers, scholars and students of universities/colleges in the interest of higher education and research. The cooperative arrangement between the UGC and the Indian Institute of Advanced Study would serve an important national interest with minimum financial resources. A Coordination Committee has been set up to jointly work out and promote the activities specifically needed for the functions of the Institute related to its role as an Inter University Centre for humanities and social sciences.

3.09 Major Research Projects (Humanities and Social Sciences)

The Commission provides assistance to teachers, both in service as well as superannuated, from universities and colleges for undertaking research or learned works in their fields of specialisation. Research projects under the scheme may be undertaken by an individual teacher or a group of teachers who could collaborate. Priority is accorded to topics having an inter-disciplinary bias. Research projects are approved on the recommendations of experts and expert committees constituted by the Commission. Assistance by the Commision includes funding for appointment of junior research fellows, research associates, visits for the fieldwork, equipment, computation work, books & journals, contingencies and other items needed for the project.

During the period under report, the Commission approved 59 major research projects including those of superannuated teachers in different disciplines of humanities and social sciences. Grants amounting to Rs.28.65 lakhs were released for the purpose.

3.10 Minor Research Projects (Humanities and Social Sciences)

Under this programme, a teacher intending to undertake a short-term research project or an investigation for a doctoral degree under approved supervision, is provided financial assistance upto a ceiling of Rs. 15,000/- by the Commission. Support under this programme is generally provided to such of the teachers, who do not have adequate resources to meet the expenses connected with their research either for a degree or as part of their individual project. Assistance is available for purchase of books and journals, field work, preparation of questionnaires, computation work, small equipment and contingencies specially needed for the proposed project but not normally available in the institution where the teacher is employed.

3.11 Major Research Projects in Science

The Commission also provides assistance for major research projects undertaken by a teacher/group of teachers in science subjects to enable them to keep abreast of the latest developments in their subject areas. Assistance is provided on the same lines as for humanities and social science subjects. The projects are monitored annually with the help of a monitor for each project and also by organising group monitoring for all projects in different disciplines. During the year, the Commission approved 268 projects in different branches of science. Grants to the tune of Rs.329.77 lakhs were released for the purpose during 1990-91.

3.12 Minor Research Projects in Science

Like in humanities, assistance is also provided by the Commission for undertaking minor research projects in science subjects. Assistance is available for purchase of books & journals, field work, equipment, contingencies etc. specially required for the proposed project. During the year, the ceiling of assistance for such projects was raised to Rs.25,000/-.

3.13 Major Research Projects in Engineering and Technology

The Commission is providing financial assistance to faculty members in the universities/colleges as well as to the retired teachers to enable them to take up well-defined time-bound research projects in Engineering/Technology with particular stress on projects of national importance, R&D in new areas and of an inter-disciplinary nature. During the year, the Commission approved 18 such projects and grants amounting to Rs.27.23 lakhs were released for the purpose.

3.14 Minor Research Projects in Engineering/Technology

The Commission also provides assistance for undertaking minor research projects in Engineering and Technology. During the year, five minor research projects were approved by the Commission.

3.15 Career Awards

The scheme initiated by the Commission in 1979-80 aims at identifying young talented teachers, having proven competence and potential for research in their areas of specialisation, with a view to promote their professional growth by enabling them to devote their efforts and energies in research and study with lesser teaching responsibilities. Ordinarily, Career Award is offered for a period of three years to lecturers and readers in universities and colleges who are normally not more than 40 years of age and who have completed doctoral/post-doctoral degree or other equivalent professional training. The Commission pays the awardees their full salary and allowances. In addition, the Commission provides each awardee with a research grant upto Rs. one lakh in the case of social sciences and humanities and Rs. 1.5 lakh for science, engineering and technology subjects and two or three research fellows during the tenure of the award, depending upon actual requirements. The awardees may spend the duration of the award in their own institution or any approved institution in the country. They are also expected to participate in teaching programmes of the concerned department. 20 awards are available annually in science and engineering, while 15 are available in humanities and social sciences.

SECTION 4

COSIST PROGRAMME

4.01 Objectives & Progress

The Commission, on the recommendation of the erstwhile Science Advisory Committee to the Cabinet (SACC) and the Government of India (Ministry of Education), launched a scheme called "Strengthening of Infrastructure in Science and Technology" in the year 1983-84.

The main thrust of the scheme is to provide infrastructural support on a very selective basis to such departments which have shown promise of high quality research out-put or imparting good quality education or both. The ultimate goal is that in course of time such departments may stand at par with their counterparts elsewhere in the world and thecountry can have the best output from the already available academics. Normally, support under the programme is meant for a period of five years and thereafter the question of extending further support is decided on the basis of performance of each department.

The departments which merit support under this scheme are selected through very stringent norms which are determined by the Standing Committee on Strengthening of Infrastructure in Science & Technology constituted by the Commission. This Committee comprises experts from different areas in science and technology and representatives from other funding agencies like DST, CSIR, AICTE etc. For final selection of departments, assistance is taken from expert groups in the concerned areas.

One of the important aspects of this scheme is that it has an in-built system of continuous monitoring done by subject experts who visit the departments from time to time to assess the impact of the scheme. The COSIST supported departments have been given functional autonomy to constantly update their curricula, enrich their scope and contents and introduce teaching methods which are more conducive for student's learning than teacher's teaching and also to introduce new experiments which have direct bearing on the ongoing research programmes. Monitoring reports reveal that many departments have taken positive steps in the above directions. Majority of the departments supported under the scheme have contributed significantly in the area of research as evinced from the research publications and the "impact factor" as well as in terms of Ph.D. out put. In many of the COSIST supported departments the faculty members have bagged prestigious national and international awards. Also, the availability of adequate infrastructural support has helped these departments to attract project support from various other funding agencies like DST, DAE, DRDO, CSIR, DOE, etc.

It is expected that in course of time COSIST supported departments will play a catalytic role in motivating other departments to achieve excellence in research and teaching.

Since a major portion of the COSIST support is earmarked for acquisition of sophisticated equipment, adequate steps have been taken to ensure that these equipment are maintained properly and remain functional. For this purpose, an amount equivalent to 5% of the cost of the equipment is being provided to these departments.

The support provided to the departments under the scheme since its inception is given below.

Year	No. of Deptts. Selected	Total Expenditure incurred (Rs. in lakhs)
1983-84	12	452.2
1984-85	26	699.8
1985-86	16	380.3
1986-87	8	779.9
1987-88	19	999.5
1988-89	17	899.1
1989-90	12	799.7
1990-91	1	849.2*
Total	111	

* Includes grants paid to the departments which were identified earlier as well as those identified for support in the second phase.

A detailed list of the departments supported under the scheme is given at *Appendix-XV*.

4.02 **Monitoring & Evaluation**

As stated above, concurrent monitoring and evaluation is an integral part of the scheme. The departments are generally visited by subject experts after about one year from the date of providing the initial instalment of grant.

During the year under report, performance of 35 departments which had completed more than 5 years of support under the scheme was evaluated in terms of research out-put, scientific manpower trained (Ph.D. produced), modernisation of courses etc. by expert committees comprising of subject experts in concerned disciplines. On the basis of this review, the expert committee noted that 34 departments had fulfilled the objectives for which

COSIST support was provided to them and accordingly these 34 departments continued to receive support for the second phase i.e. from 1990-91 to 1994-95. One department viz., the Department of Chemistry, Jodhpur University was not supported under the second phase as its performance was found to be much below expectations. However, it was agreed to provide only recurring expenditure to the above department for a period of one year and thereafter the performance will be evaluated to decide for the continuance of the scheme or otherwise.

In addition to the above, one new department viz., the Department of Plant and Cell Biology,Delhi University (South Delhi Campus) was identified for support under this scheme and was provided necessary financial assistance. The COSIST Standing Committee, while approving the second phase of support, desired that in future when assistance is provided under COSIST programme, the sanction letters should clearly indicate the items for which grants are being provided i.e. for teaching and research separately so that there will be clear identification about the components which are approved for teaching or research. It was also desired by the committee that the departments supported under the COSIST scheme should give a brief report specifying the goals they envisage to achieve, with the assistance provided to them, by the year 1994-95.

The Committee also desired that the assisted departments, for the purpose of appraisal, may be requested to furnish the following:

- Titles of research papers published with details of journals in which they were published.
- Research out-put of each member of the group benefitted through the programme.
- Extent to which the equipment given under the programme have been put to use.
- Linkage achieved with non-COSIST departments in the nearby universities and the result thereof.

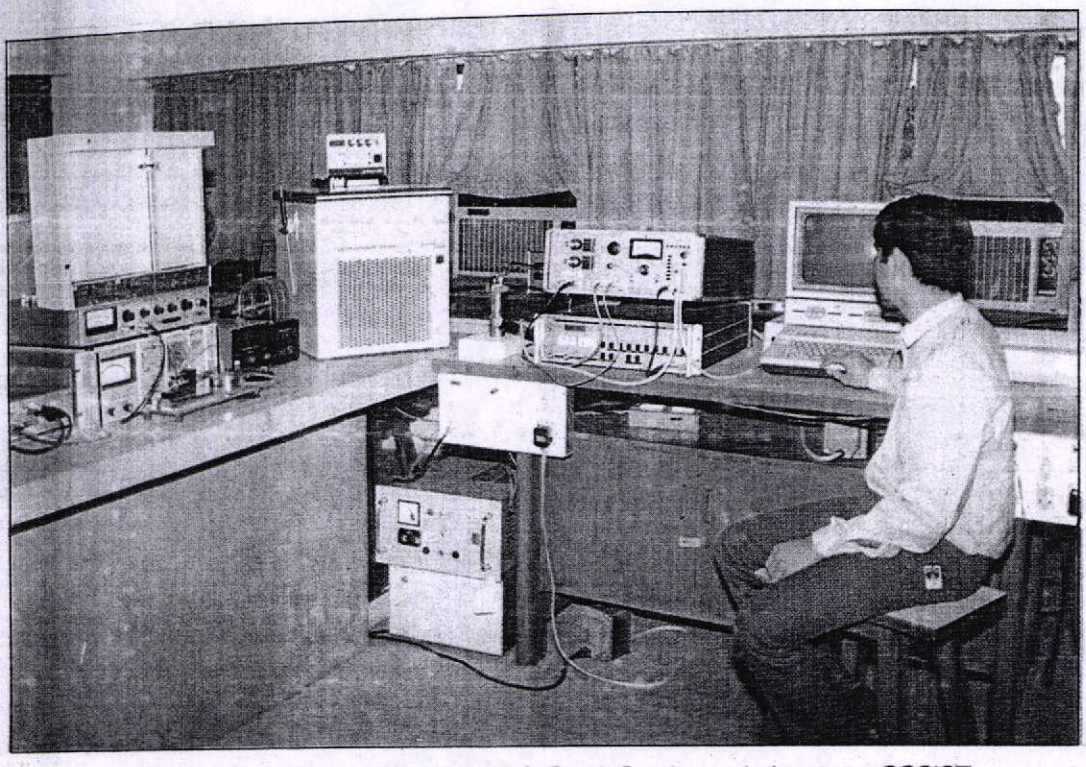
It was further desired that the above points may be brought to the notice of the expert committees so that they can keep these in view while considering the question of providing further assistance or renewal of the programme.

4.03 **Recommendations of the sub-group**

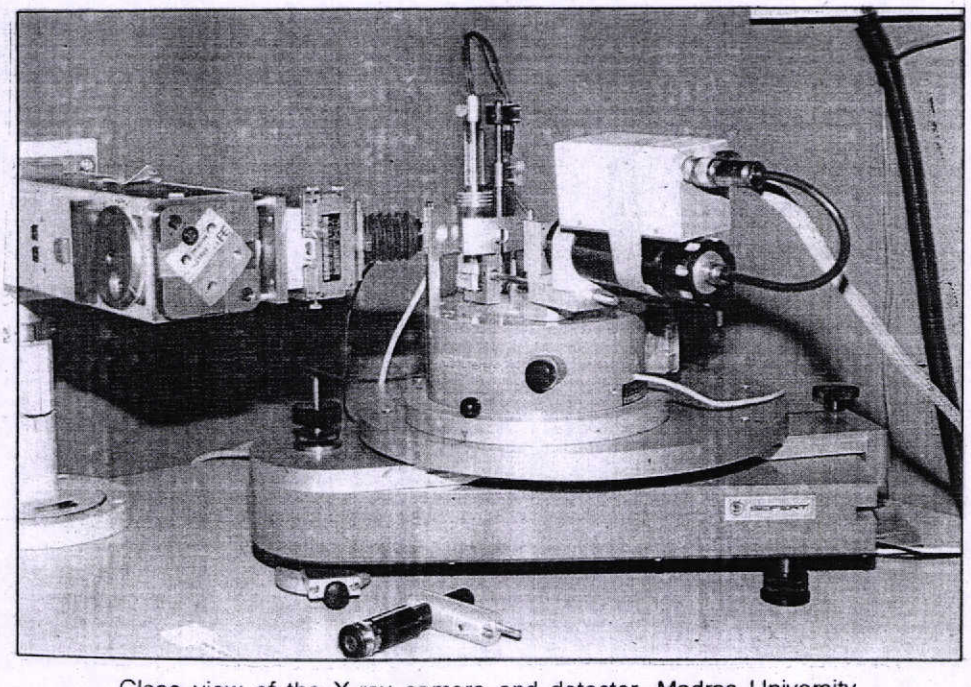
The sub-group on higher education for the Eighth Plan period discussed the programme and made recommendations regarding various aspects of the programme. Some of the important recommendations made by the sub-group are as follows:

(i) **On-going Programme**

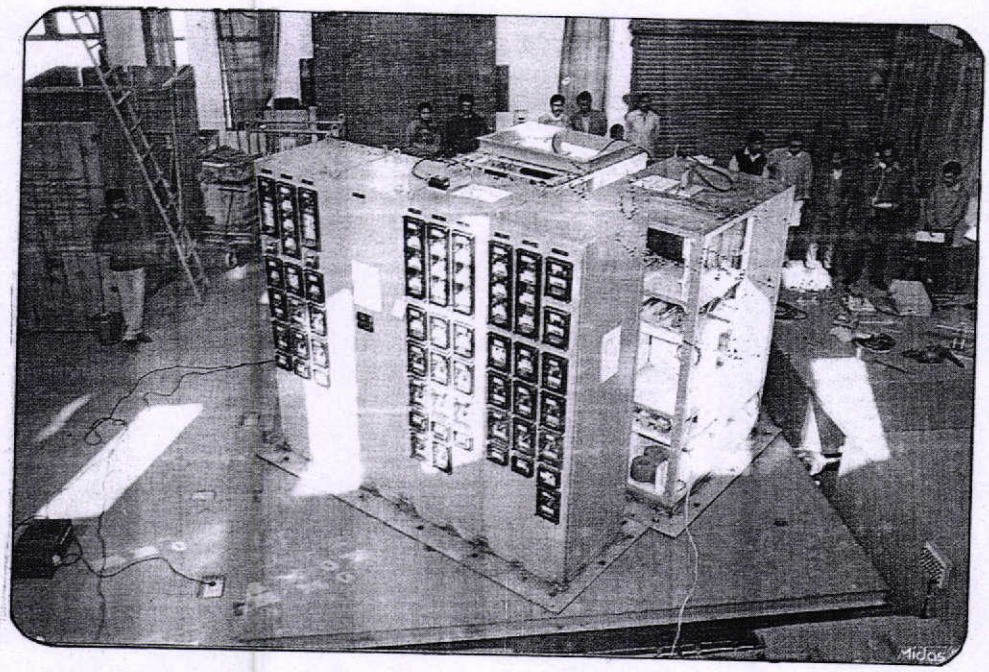
The on-going programme of COSIST should continue as such with the modification that, wherever necessary, staff and building may also be provided. At present, building grant is provided only in very exceptional cases to house equipment purchased through the scheme. Supporting staff on a selective basis are provided for maintenance of equipment.



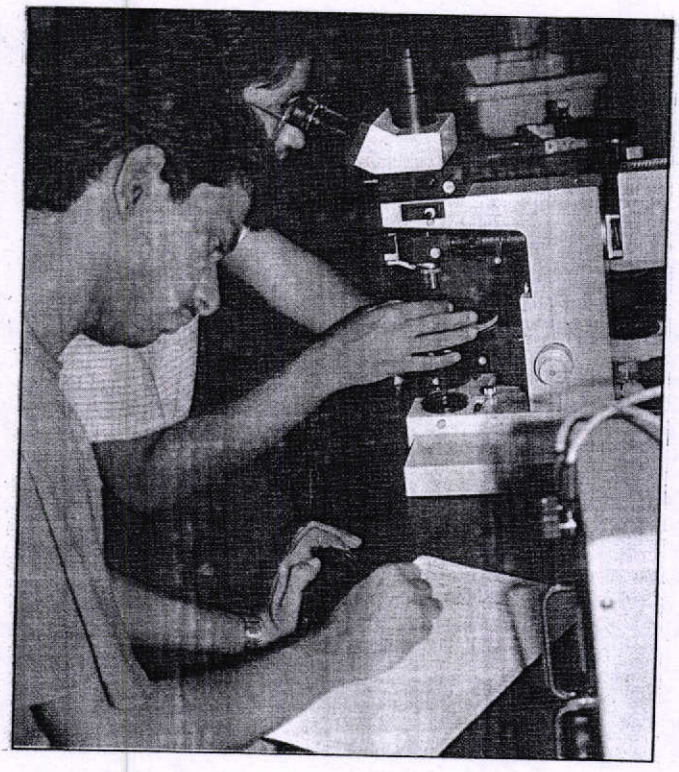
Solid State Physics (Experimental) Semi Conductor Laboratory, COSIST



Close view of the X-ray camera and detector, Madras University



LT Switch Board with ACBs and Relay Control Panel, School of Earthquake Engineering, Roorkee University



Geological Sciences Department, Jadavpur University

(ii) **Linkages**

(a) Departments which have merited support under COSIST may be provided with additional grants so that they can invite other departments which are neither funded through COSIST nor SAP to establish appropriate linkages. This endeavour is expected to help the developing departments to enrich the quality of teaching and research. For this purpose each COSIST department has to identify certain departments with whom the linkages have to be established.

(b) For optimal utilisation of resources certain equipment requiring large investments may be used as national facilities and such equipment may be obtained through COSIST scheme. For this purpose grants for travel, maintenance or hiring charges and consumables may be provided for effective utilisation of these common facilities.

(iii) **Funding New Departments**

There is a need to support new departments as per the established norms.

(iv) **Extension of support to viable research groups**

There are certain departments in the country which can not be considered as excellent ones in terms of their overall performance in teaching or research or both taken together. But in many such departments there are talented teachers who have shown promise of good quality research and in fact many of them through individual / group efforts have made significant contributions in their areas of specialisation, which have been duly recognised by experts in the concerned subjects. It has been decided by the Standing Committee on Strengthening of Infrastructure in Science and Technology that steps may be taken to identify such research groups of individuals and their performance be assessed with a view to provide them necessary infrastructural facilities. Interdisciplinary research/teaching proposals of high quality may also be considered for support under this scheme.

(v) **Interfacing and Infrastructural Development with National Facilities**

It may not be possible to build up high quality research infrastructure in all areas within the educational system. Therefore, the laboratories within the higher education sector which are funded through COSIST scheme should establish appropriate interface with other R & D laboratories, like national laboratories or industries for joint research venture as well as for training in specialised areas.

SECTION-5

MAINTENANCE AND COORDINATION OF STANDARDS

5.01 The Commission has statutory responsibility for the promotion and coordination of university education and for the determination and maintenance of standards of teaching, examination and research. In discharging this responsibility, the Commission seeks the advice of experts drawn from the university system and outside. In this regard, a number of measures have been taken like formulating a Model Academic Calender, framing regulations laying down qualifications of teachers for recruitment, evolving a package of examination reforms, conducting national test for the award of junior research fellowhips and eligibility of lecturers for recruitment etc. The Commission has also been impressing upon universities to restructure courses in tune with the needs of a changing society and with greater thrust on project/field work involving greater use of initiative and creativity of the student. A number of journals have also been launched particularly for the benefit of the teaching community for improving their professional competence. In the Eighth five-year plan, the Commission has advised the universities to bying about consolidation of the existing programmes and develop linkages with agencies and institutions outside the university system, particularly those which are devoted to research and development in order to make the university education more meaningful.

5.02 **Alternative Models of Management**

The Programme of Action arising out of the National Policy on Education 1986, interalia, lays emphasis on making higher education more dynamic. In this regard, a number of suggestions were contemplated in the said document and one of the suggestions was "To review the management pattern including the structure, roles and responsiblities of various universities/bodies in the light of new demands on the university system".

In pursuance of the above recommendation, the Commission appointed a committee in Janurary, 1987 under the Convenorship of Prof. A. Gnanam with the following broad terms of reference:

i) To review the management patterns including the structure, roles and responsibilities of various university bodies in the light of the new demands on the university system to develop effective alternate models; and

ii) To set criteria for assessment of performance of educational institutions.

Major recommendations of the Committee pertain to the Concept of Mangement Pattern of Universities particularly with a participatory approach and greater decentralisation. It also emphasises on aspects like university autonomy, accountability, planning, funds and interrelationship between the University, State Government and the UGC. It has also defined the

powers and functions of various functionaries/authorities and bodies in the unviersity system. This report was discussed in a special meeting of the Commission held on 30-31st July, 1990 and also on 11th October, 1990. The Commission forwarded the report and the recommendations on it by the Commission sent to the Ministry of Human Resource Development, Department of Education for further necessary action. The Government of India in the Department of Education placed the Gnanam committee report along with the recommendations made by the Commission in the CABE meeting held on 8-9th March, 1991. The CABE, considering the far-reaching repercussions of this report, desired that a sub- Committee of the CABE may be constituted to examine the report.

5.03 National Educational Testing

The University Grants Commission conducts a test for Junior Research Fellowship and Eligibility for Lectureship in humanities and social science subjects including languages twice a year. Similar test in science subjects is conducted twice a year jointly by the UGC and CSIR. Candidates who have obtained 55% makrs and above in their Master's degree and have completed M.Phil upto 31st March, 1991 and those who will be awarded Ph.D.degree upto December, 1992, stand exempted from appearing in the UGC- CSIR test for eligibility for lecturership only.

During the year 1990-91, the Commission conducted the test only once on 20th January, 1991 at 83 centres for determining the eligibility for lecturership and for the award of Junior Research Fellowship in 85 groups of subjects falling under the faculty of humanities and social sciences including languages. A list of these subjects is given at *Appendix-XVI*. Out of 34981 candidates registered for this test, 25596 appeared and 906 were declared qualified for the award of Junior Research Fellowship and eligibility for Lecturership while 1348 were declared eligible for Lecturership only. The test in science subjects conducted jointly by the UGC and CSIR was held twice during the year viz. on 30th June and 30th December, 1990 respectively. Subjects in which these tests were conducted are given at *Appendices -XVII and XVIII* respectively. In the June 1990 test, 13555 candidates registered of which 8955 appeared and 392 were declared qualified for Junior Research Fellowship. In the December test, 13895 candidates were registered out of which 8489 appeared and 411 were declared qualified for Junior Research Fellowship and eligibility for Lecturership while 503 were declared eligible for Lecturership only.

5.04 Restructuring of Courses

The scheme of restructuring of courses was initiated by the Commission in the Fifth Plan with a view to making the first degree courses more relevant to environment and to the developmental needs of the community and to link education with work/field/practical experience and productivity.

The scheme has been conceived as a major programme for reform of higher education at the undergraduate level. The programme aims at imparting to every undergraduate student grounding in the following areas.

i. A set of foundation courses designed to create an awareness of areas such as Indian

History and Culture, History of the Freedom Struggle in India and other parts of the world, Social and Economic life in India including concepts and processes of development, Scientific methods including the role of science and technology in development, Alternative value systems and societies based thereon, Cultures of Asia and Africa (selected countries) and Gandhian thought.

ii. A set of core courses to give an opportunity to students to acquire broad familiarity with some chosen disciplines, including study of one or more of them in depth.

iii. Some applied studies/projects/field activity to form an integral activity of the course and to be carried out in the final year, and

iv. Involvement in a programme of national or social service for the first two years.

In order to bring larger number of colleges in the fold of the scheme, the Commission has raised the ceiling of assistance from Rs.5.00 lakhs to 7.5 lakhs (for a five- year period) to a college participating in the scheme in the Eighth five-year plan.

As on 31-3-1991, nine universities and 208 colleges had introduced restructured courses under the scheme. The Commission has also desired that the work of restructuring of courses may be undertaken on the pattern of Curriculum Development Centres.

5.05 College Humanities and Social Science Improvement Programme (COHSSIP)

This programme was intiated in 1974-75 to bring about qualitative improvements in teaching humanities and social science subjects at the undergraduate level in the affiliated colleges by way of (a) adoption of new teaching methods (b) extension of library services, (c) introduction of special courses, (d) inter-disciplinary programmes, (e) adoption of various measures of examination reforms, (f) remedial teaching and (g) field/ project work etc. The programme provides an opportunity to colleges to initiate experiments for bringing about improvements in teaching, learning, curriculum and examination pattern. Upto 31.3.1991, 685 colleges (including 50 Teachers' Training Colleges) had been assisted in the first phase and 99 in the second phase of the programme. The programme is under review.

5.06 College Science Improvement Programme(COSIP)

The programme, initiated in 1971, aims at bringing about qualitative improvement in the teaching of science subjects at the undergraduate level in the affiliated Colleges. This is sought to be done through improvements in the subject matter, methods of instruction, syllabi, curricula, laboratory exercises, workshops, library and teaching materials. The programme has brought about awareness of the importance of science education both at college/university level. As on 31st March, 1991 COSIP was being implemented in 314 colleges. The programme is under review.

5.07 University Leadership Programme

University Leadership Programme aims at improvement of instruction in selected subjects in all the colleges affiliated to a university. The department concerned in the selected

university provides necessary guidance, advice and assistance to the college departments regarding curricular reforms, methods of instructions, syllabi and courses of study. Improvement of instruction in the subject is to be brought about within the existing framework of the prescribed syllabi and the examination procedures. As on 31st March,1991, 24 university departments in humanities and social science subjects and 41 university departments in science subjects were participating in the programme. The programme is under review.

5.08 **Subject Panels**

The Commission has panels of experts drawn from the university system which advise it on matters related to maintenance and improvement of quality of teaching and research in various subjects. The recommendations of these panels go a long way in updating and modernising subject courses and introducing new dimensions in teaching and research. The recommendations made by the panel on Electronics and Instrumentation and Engineering during 1990-91 are given below. Panels in other subjects of Sciences and Humanities including Social Sciences could not meet as these were being re-constituted during the year.

5.09 **Panel in Electronics and Instrumentation**

The Commission is providing assistance for M.Sc. Electronic Science course in Delhi university, Poona university, Calcutta university, Kurukshetra university, Cochin university of Science & Technology, Devi Ahilya Vishwavidyalaya, Berhampur university, Bihar university, Bangalore university, Sardar Patel university and Gauhati university.

As per decision of the Panel meeting held during 1990-91, the nomenclature of the course has been changed to M.Sc. Electronic Science course instead of M.Sc. Electronics. The Panel also decided that Advisory Committees headed by Vice-Chancellor of the University, a representative of the University Grants Commission, a representative of the Department of Electronics and a few Professors of the course may be set up to monitor the implementation of the above programme. The performance of old departments viz., Delhi, Poona and Calcutta may be reviewed.

5.10 **Panel in Engineering**

The panel suggested that the UGC may institute an award in Engineering of Rs. 20,000/- p.a. out of Rs. 2 lakhs given by the Anna university to the UGC for the purpose.

5.11 **Special Assistance Programme (SAP)**

Under this programme, the Commission provides substantial assistance in terms of essential manpower, teaching materials and equipment to a number of university departments carefully selected on the basis of their work and achievement in order to improve quality and content of studies at the postgraduate and research level. The primary aim of the scheme thus is to encourage "pursuit of excellence".

The programme is operated by the Commission by providing assistance at three levels viz., Centres of Advanced Study (CAS), Departments of Special Assistance (DSA) and

Departmental Research Support (DRS). While the scheme of recognising certain departments as Centres of Advanced Study (CAS) was initiated by the Commission in 1963-64, the scheme of Department of Special Assistance (DSA) was initiated in 1972 as a supporting programme for Centres of Advanced Study (CAS). Its major aim has been to promote advanced study and group research effort so that the identified department can strengthen research in its thrust areas. The DSA in course of time could be considered for recognition as a Centre of Advanced Study. The scheme of Departmental Research Support was initiated in 1977 as a programme supportive to the Department of Special Assistance with the basic objective of promoting group research effort so that, after evaluation, the identified department could be recognised as Department of Special Assistance. On the recommendations of expert committees, the Commission has been providing assistance on 100% basis for Special Assistance Programme by way of staff (academic and technical), building, equipment, books and journals, JRF/ Research associates, contigencies, chemicals and glasswares, travel, seminar/symposia, visiting faculty, transport, maintenance etc. The performance of the departments participating in the scheme of special assistance is continuously monitored. Even before the selection of the department for participation under this scheme, its achievements are examined by the concerned subject panel. The recommendations of the panel are considered finally by the Commission. After approval of the Commission, expert committees visit these departments and assess their needs after detailed discussions with faculty and students. As per guidelines of the Commission, the departments participating under SAP at the level of CAS/DSA/DRS are required to constitute an advisory committee to monitor the implementation of the programme. This committee is required to meet once a year and examine the annual report and future programmes of the department. The departments are further reviewed periodically after 3/5 years with the help of expert visiting committees. These committees generally visit the departments and discuss in detail the achievements made by the departments during that particular phase and constraints, if any, in implementing the scheme and make recommendations accordingly. The reports of the expert committees are finally placed before the Commission for appoval.

The scheme has been monitored rigorously in order to maintain highest standards of teaching/research in the university system. A review of the scheme has brought out that it has enabled the SAP departments to have collaborative programmes at the national/international levels and attract as well as retain the best talents in the country. Based on the recommendations of the expert committee, a department is permitted to continue at the same level or upgraded to the next higher level or even discontinued, keeping in view its performance. The Commission derecognised a number of departments as their performance was not found to be of the requisite standard as assessed by expert committees. As on 31.3.1991, there were 16 CAS, 93 DSA and 18 DRS in humanities and social sciences *(Appendices-XIX, XX and XXI)* and 41 CAS, 106 DSA and 43 DRS *(Appendices-XXII,XIII and XXIV)* in science and technology subjects.

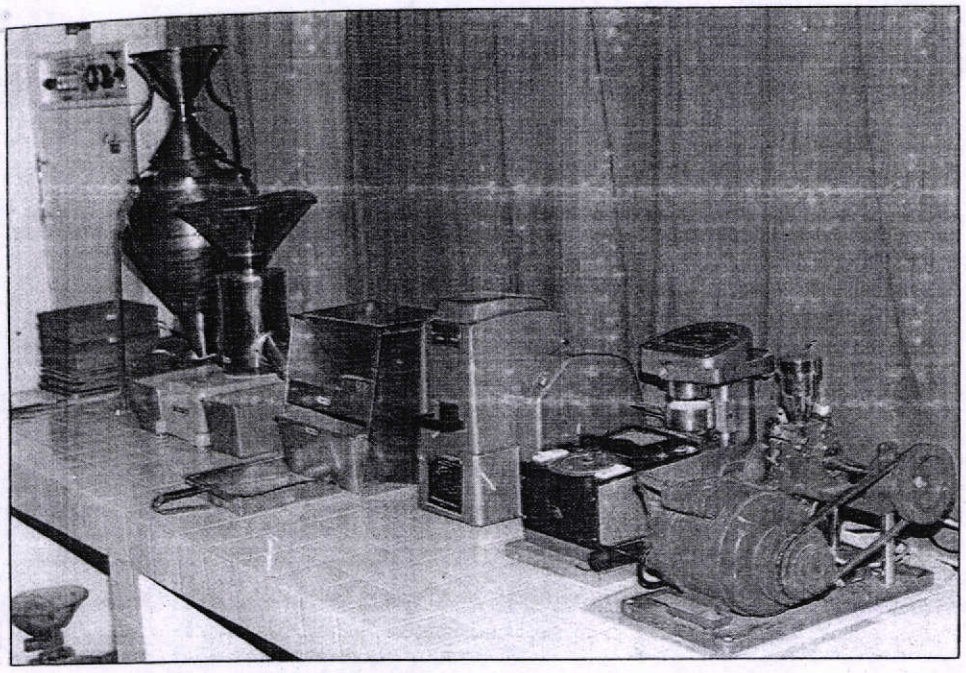
5.12 Curriculum Development Centres

The scheme, initiated in 1986, aims at setting up Curriculum Development Centres (CDCs) in different disciplines to carry out (i) thorough review of the existing syllabi and courses in different universities at various levels of higher education (ii) suggest measures for

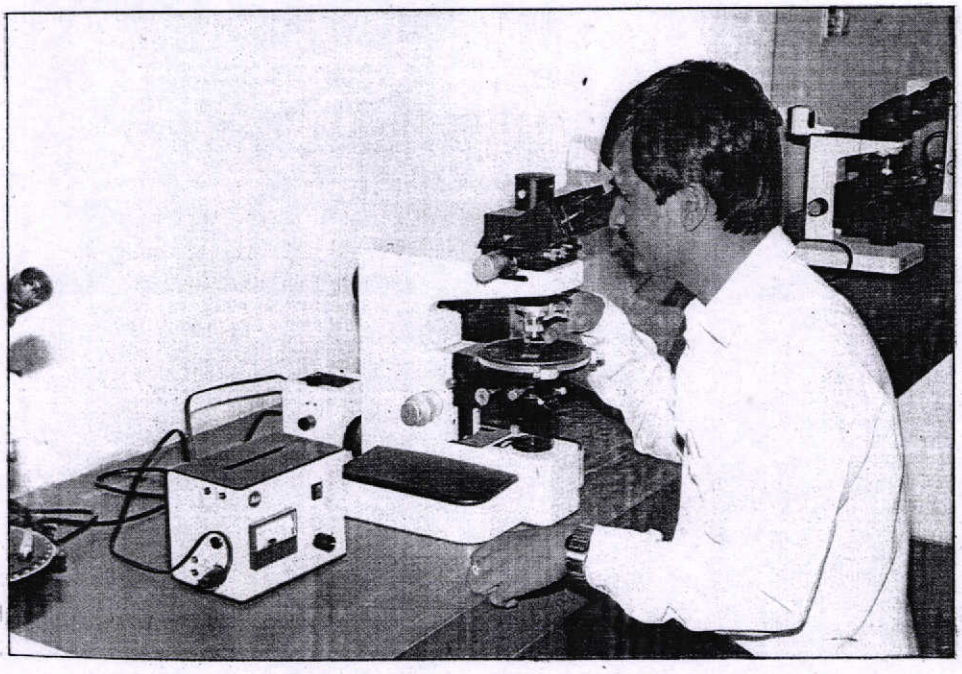
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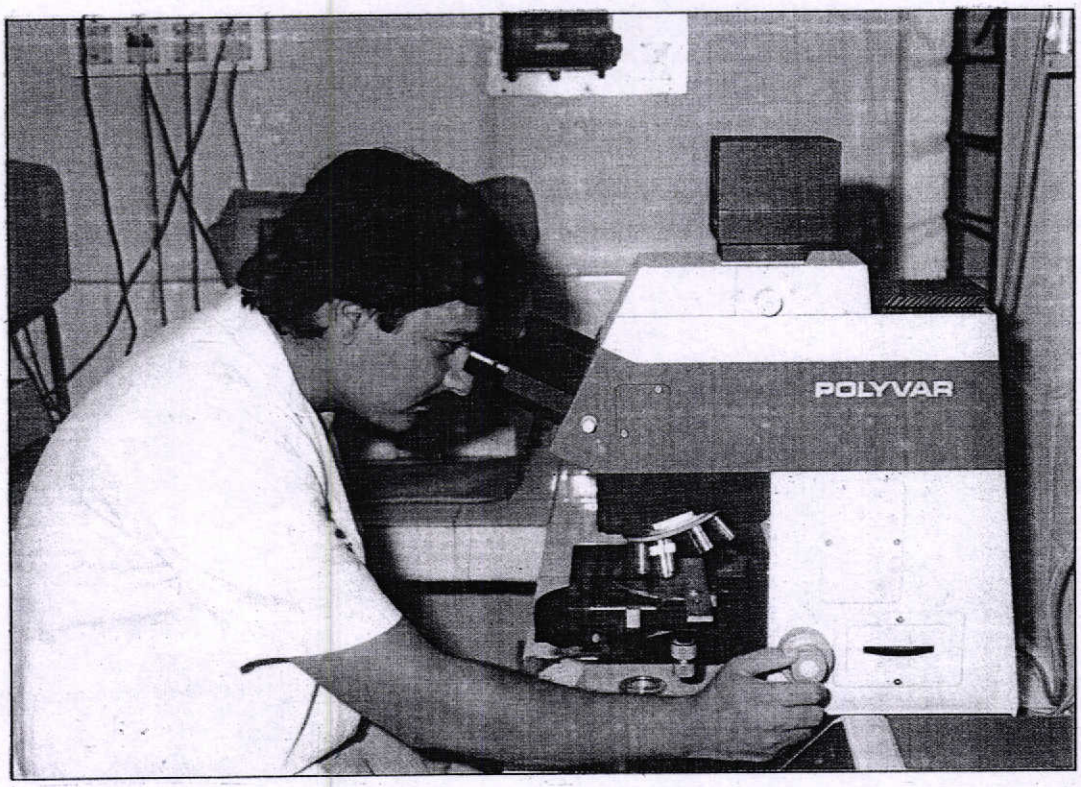
Centres (CDCs)
and courses in
measures for



Devices used in Seed Quality Testing Laboratory, Department of Applied Botany, Mysore University



Polarising Microscope, Department of Geology, Bangalore University



Polyvar Microscope, Department of Microbiology, M. S. University

modernising and restructuring these courses into unit courses and (iii) develop alternative models emphasising different aspects of study of the subject concerned.

As on 31st March, 1991, 27 CDCs had been set up in various subjects (10 in science subjects and 17 in humanities and social sciences subjects). A list of these Centres is given at *Appendices-XXV (a) and (b).* The Commission has received model curricula from these Centres which were discussed at national level workshops for circulation to universities. During the year, the Commission accepted the proposal of publication of CDC reports for wide circulation and sale through the Graphic Arts Centre, University of Delhi. For this purpose, it was agreed that the Commission would extend a subsidy of 50% of the cost of publication so as to keep the sale price within reach.

The curriculum have been so designed that they emphasise learning rather than teaching as the core element of human resource development and recast the curriculum packages in modular form with greater thrust on the student's motivation to learning than to teacher's lecturing. Students have to be given home assignments, tutorials, problemsolving sessions, term papers etc. Project/field work are to be inherent components of the curriculum to ensure regular use of library and laboratory facilities by the students. The curricula have been developed by groups of experts in the concerned subjects from different universities, laboratories and other bodies. In the case of undergraduate curriculum, experts have been chosen from colleges as well.

5.13 Examination Reforms

The Commission has been emphasising implementation of various measures of examination reforms such as continuous internal evaluation, development of question banks, grading system, semester system and some minimum reforms relating to syllabi, question papers and conduct of examinations. The position relating to the implementation of various measures of examination reforms as on 31.3.1991 was as under:

i. Continuous internal evaluation at different levels has been introduced by 52 universities, 18 institutions deemed to be universities and 23 agricultural/technological universities;

ii. Question banks have been or are being developed in 18 universities, 8 institutions deemed to be universities and 5 agricultural universities;

iii. Grading system is in operation in 23 universities, 12 institutions deemed to be universities and 22 agricultural/technological universities;

iv. Semester system is in operation in 51 universities, 13 institutions deemed to be universities and 19 agricultural/technological universities;

v. Eighty-nine universities/insitutions have taken or are taking steps to demarcate the syllabus in each paper into well-defined units/areas of content alongwith a topicwise break-up.

vi. Eighty-five universities/institutions have decided that examiners should be free to repeat questions set in the previous examinations;

vii. Eighty-four universities/institutions have decided that the choice should be restricted to each unit of syllabus instead of giving wide choice to students for answering of questions.

viii. Eighty-one universities have supported the view that no examination should be held without fulfilling the requirements of a minimum number of lectures/tutorials/laboratory sessions; and

ix. Eighty-six universities/institutions have informed that they are taking steps to ensure the smooth conduct of examinations such as effective security measures, proper supervision and invigilation and stern action in all cases involving copying and use of unfair means.

5.14 Preparation of University Level Books by Indian Authors

The Commission has been operating the scheme since 1970-71 under which financial assistance is provided to outstanding academics and scholars in the universities, colleges and other institutions of higher learning and research for preparation of high quality books, monographs and other reference materials for use in the universities and colleges. The operation of the scheme was suspended and the scheme was under review. The review has since been completed and new guidelines issued.

5.15 Publication of Learned/Research work including Doctoral Theses

The Commission has been providing assistance to universities under the scheme of publication of learned/research work including doctoral theses. The honorarium payable for evaluating Ph.D.theses/learned research work is Rs. 200 per work/thesis to each of the experts upto a maximum of two experts as per guidelines laid down by the Commission.

5.16 Hari Om Ashram Trust Awards

These awards are made to outstanding scholars for their significant contribution in different fields. The award carries a citation and a cash prize of Rs.10,000/-. These awards include the Sir C.V.Raman Award for Experimental Research in Physical Sciences, the Homi J. Bhabha Award for Research in Applied Sciences, the Meghnad Saha Award for Research in Theoretical Sciences, the Jagdish Chandra Bose Award for research in Life Sciences and Hari Om Ashram Trust Award for inter-action between Science and Society. During the year, nominations were invited for these awards.

5.17 Swami Pranavananda Awards

These awards are given to distinguished scholars for their outstanding contributions to human knowledge. The award carries a citation and a cash prize of Rs.10,000/-. The awards are for Education, Sociology, Economics, Political Science and Environmental Science including Social Anthropology and Ecology. During the year, nominations were invited for these awards.

5.18 Gandhian Studies

The Commission continued to give support to universities for various programmes of Gandhian studies and values and strengthening of Gandhi Bhavans. The Commission also continued the approved positions of Research Associates in Gandhian Studies.

Two national seminars under the Gandhian Studies Programme titled (i) "Conflict Resolution through National Violence - Role of Universities." and (ii) "Gandhian approach to Rural and Tribal Development"were organised by the Delhi University and Guru Ghasidas University in October and December 1990 respectively.

5.19 Buddhist Studies

The Commission has been providing assistance to selected universities on cent per cent basis outside the plan allocation for the promotion of Buddhist Studies. Assistance is provided mainly for the appointment of staff and purchase of books with a view to strengthening teaching and research related to Buddhist Studies.

5.20 Nehru Studies

The Committee on Nehru Studies at its meeting held in August, 1988 had suggested that Nehru Study Centres may be set up in a few central universities. The suggestion was not accepted and, instead, it was thought appropriate by the Commission that the Centres for Gandhian Studies may also like to include Nehru Thought in their programme of activities for which UGC could extend assistance. The universities having Gandhian Study Centres were being consulted in this regard.

SECTION-6

DEVELOPMENT OF UNIVERSITIES

6.01 Development grants are paid by the Commission to those universities which are declared fit under Section 12(B) of the UGC Act in order to facilitate the procurement of such infrastructural facilities as are not normally available to them from the state governments/other bodies supporting them. The Commission generally provides assistance for academic buildings, student hostels, equipment, books & journals, staff quarters and other facilities designed to promote the quality and level of teaching and research as well as to foster corporate life on the campus.

6.02 **Eighth Plan Guidelines for formulating proposals for the Development Schemes of Universities**

The Commission envisages to further enhance the capability of universities in teaching and research during the Eighth Plan period. It has advised the universities to develop linkage with agencies and institutions outside the university system, particularly those which are devoted to research and development in order to make university education more meaningful. The universities will be encouraged to adopt the emerging areas in science and technology that have ample relevance for social and economic development like Electronic Science, Computer Sciences, Bio-technology, Oceanography and Environment and Energy Studies.

The 'Guidelines for forumulating Proposals for the Eighth Plan Development Schemes of Universities' as approved by the Commission and circulated to universities last year envision consolidation of the existing programmes.

Priority would be accorded to strengthening of existing post-graduate departments in terms of laboratories, workshops and library services. The offering of new specialised courses or opening of new departments might be contemplated with an inter-disciplinary approach which could be sustained by the existing facilities within the developed universities. In the case of developing universities, opening of new departments would be determined by overall needs for such departments within the state or region as a whole after taking into account similar facilities available elsewhere in the region and studying the manpower needs. Universities are desired to discourage opening new departments of study with sub-viable level of inputs and inadequate preparation. Courses which have lost relevance or are outdated could be dispensed with and teachers in such subjects retrained.

The guidelines further urge the universities to provide teaching aids to all departments and to produce course- packages in major disciplines on video tapes for teachers and students to enable them to keep pace with advances in their fields of specialisation and also in the methodology of teaching. The universities have also been advised to improve the common

facilites for students including counselling services and linkages with appropriate employment agencies.

The pattern of UGC assistance to universities for development of undergraduate and postgraduate teaching and research facilities under the institutional development schemes during the Eighth Plan has been modified. Now theuniversitieswill be provided with 100 per cent assistance in respect of library building and women's hostel while for other buildings like laboratories, class-rooms, central workshop, green house, glass house, animal house, guest house, boys' hostel, teachers' hostel, staff quarters, canteen building, visiting faculty complex, etc., and establishment/improvement of university presses, health centres and improvement of facilities in existing hostels, 75 per cent financial assistance will be extended by the Commission. Earlier the assistance was to the extent of 75 per cent and 50 per cent respectively. Also the universities will now receive 75 per cent assistance for campus development including road development, water supply and electricity. There was no provision for such assistance during the Seventh Plan period. In respect of additional teaching, technical, library and administrative supporting staff, equipment, books and new journals, faculty improvement programmes, extension programmes and services including training, continuing education and cultural activities, the UGC assistance will, however, continue to be 100 per cent as in the past.

6.03 Recommendations of Expert Committees for Eighth Plan Development proposals of Universities

The Commission accepted the recommendations made by Expert Committees in respect of 8th Plan development proposals of State universities and agreed that the annual component for 1990-91 amounting to Rs.2537.00 lakhs may be implemented for the present. The allocations shown under Part I and Part II may be treated provisional as these were subject to revision on the basis of total plan outlay of UGC on this scheme. While communicating this decision to the universities, the Commission made it clear that this commitment is only for the annual component 1990-91 and the decision regarding Part I and Part II would be communicated to them as and when they are finalised.

6.04 Campus Development in Central Universities and Institutions deemed to be Universities

The Commission continued to provide assistance for campus development of central universities and institutions deemed to be universities. During the year 1990-91, grants amounting to Rs.121.96 lakhs were released by the Commission for the purpose.

6.05 Grants under Plan Development Schemes to Medical Colleges and Hospitals of Central Universities

The Commission continued to provide grants under plan development schemes to Aligarh Muslim University, Banaras Hindu University and the University College of Medical Sciences, (Delhi University) for medical education.

These institutions were requested to formulate their Eighth Plan development proposals for medical education. Pending receipt of their proposals, the Commission decided to make sub-plan allocation for the year 1990-91 as first charge on Eighth Plan allocation in respect of books and journals and equipment.

To reimburse the expenditure already incurred by the above institutions for medical education during 1989-90, the following grants were paid during 1990-91 as first charge on Eighth Plan.

Table 6.1

University	Allocation for 7th Plan	Grants released during 1990-91 (as Ist charge on 8th Plan)		
		Medical Colleges	Hospital	Total
	(Rs. in lakhs)			
Aligarh Muslim University	263.00	2.0	32.00	34.00
Banaras Hindu University	282.70	31.75	25.00	56.75
University College of Medical Sciences (Delhi University)	200.00	15.00	--	15.00
Total	745.70	48.75	57.00	105.75

6.06 **Sub-plan for Development Schemes of Central Universities**

The Commission is making separate allocation under the sub-plan for the development of central universities, medical colleges of central universities and hospitals attached to them and the Delhi Colleges buildings under annual budget of the UGC. During the year 1990-91, the Commission decided that all the central universities be povided sub-plan allocations for 1990-91 for the following components:

(i) The amount required in 1990-91 for completing on- going building projects approved by the Commission.

(ii) The amount equal to 1/5 of VII Plan allocations for books/journals and equipments.

(iii) The expenditure on salary of VII Plan approved posts filled after 31.3.1990 and for posts approved by the Commission as a first charge on Eighth Plan.

(iv) The expenditure on other items already approved by the Commission as a first charge on Eighth Plan allocations.

Grants released to the central universities for various schemes under the sub-plan during 1990-91 amounted to Rs.1385.13 lakhs as per details given below:

Table 6.2

Scheme	Grants released/ sanctioned during 1990-91 (Rupees in lakhs)
General Development in Humanities and Social Sciences	297.97
General Development in Sciences	261.28
Medical Colleges	48.75
Hospitals	57.00
Schools attached to Central Universities	**15.00**
Campus Development	**111.63**
Delhi Colleges Buildings	**182.85**
HBA to Central Universities	150.15
Students Hostels	68.06
Miscellaneous	192.44
Total	1385.13

A statement showing grants paid to each University during 1990-91 (major headwise) under Plan and Section III is given in *Appendix- XXVI.*

6.07 **Development of Engineering & Technology**

The Commission has been providing financial assistance to universities which have their own departments in Engineering and Technology subjects for carrying out programmes of higher education and research in Engineering/Technology. During the year 1990-91, 35 universities were provided assistance for the purpose. The Commission has also been providing assistance for the award of PG Scholarships/Senior Research Fellowships for the students of Enginering & Technology in university departments.

Grants amounting to Rs.1774.63 lakhs were given by the Commission to various universities/ institution for this purpose during 1990-91.

6.08 **Management Courses**

The Commission has also been providing assistance to universities/institutions for conducting programmes in Management Studies. As on 31.3.1991, the Commission was providing assistance to 40 Universities/ institutions for running these programmes. A sum of Rs.106.13 lakhs was released for the purpose during 1990-91. This amount is a part of the overall grant released for the development of Engineering/ Technology as indicated in para 6.07.

6.09 **Development of Computer Facilities and Computer Education for Manpower Training**

The Commission has been providing financial assistance to universities for setting up computer facilities and establishment of computer centres. The number of universities covered under the scheme for installation of computer systems upto 1990-91 was 105.

The Commission provides financial assistance for purchase of PC/XT Computer systems to colleges also. Upto the end of 1990-91, 948 colleges had been provided PC/XT systems.

In order to make up the shortage of trained manpower in this field, the Commission has also been assisting universities under the UGC-DOE Joint Programme for running several manpower development courses viz.

(a) one year Diploma Course in Computer Application (DCA)

(b) Three - year Master of Computer Application (MCA)

(c) B.Tech./B.E. in Computer Science

(d) M.Tech./M.E. in Computer Science

(e) M.Sc. in Computer Science

The number of universities in which different courses have been approved upto 1990-91 is as follows:-

1. Post B.Sc. Diploma course	61
2. M.Sc.	44
3. B.Tech./B.E. in Computer Science))	13
4. M.Tech./M.E. in Computer Science)	
5. M.Sc. in Computer Science	1

6.10 Unassigned Grants

The Commission has reviewed guidelines for the scheme of 'Unassigned Grants' to universities during the year 1990-91. The salient features of the revised scheme of Unassigned Grant for 1990-91 are the following.

The schemes of providing assistance by the Commission to universities for Publication of learned/research work including Doctoral thesis and for Minor Research Projects in Science, Humanities and Social Science subjects have been emerged with the scheme of Unassigned Grant.

The revised scheme comprises four groups and the various components under each group are as under:

GROUP 'A' - Travel Grants

i. Support to teachers/scientific/technical officers/ administrative staff viz. Registrars Librarians and Director, Physical Education for participation in international conferences/ symposia held abroad.

ii. Support to Vice Chancellors for attending Commonwealth Vice-Chancellors' Conference.

iii. International travel fare and maintenance to teachers selected under International Collabration Exchange Programme of CSIR/INSA and other agencies.

iv. Support to teachers/research scholars/scientific/ technical officers and administrative staff viz; Registrars/ Librarians/ Director, Physical Education for visiting Centres of research or to attend academic conferences/seminars held in India.

v. Exchange of teachers.

vi. International travel grant to teachers for attending programmes of the ICTP and programmes of equivalent level.

vii. International travel fare to Indian Professors/teachers for taking up visiting assignments abroad.

viii. International travel fare of selected teachers for availing offer of fellowship/stipends etc. abroad.

GROUP 'B' - Seminars, Symposia etc.

i. Organisation of Model Parliament, Planning forum and National Integration activities in universities.

ii. Organisation of seminars/symposia and conferences at the international/national/state /regional levels.

Group 'C' - Publication Grant to Universities

For publication of learned research work including doctoral thesis of teachers as per UGC guidelines.

Group 'D' - Support for research for undertaking minor research projects in science, humanities and social sciences by teachers as per UGC guidelines.

During the year 1990-91, an amount of Rs.78.49 lakhs was released as unassigned grant to universities.

6.11 **Development of Performing Arts, Museums and Archival Cells**

The Commission has been taking keen interest in the development of Fine Arts promoting areas such as Performing Arts, Museums, Archival Cells/ Archaeological studies and courses in Archives and Museology.

Grants amounting to Rs.7.72 lakhs were paid for these programmes during 1990-91.

6.12 **Centre for Third World Studies**

The Commission has been providing assistance to the Jamia Millia Islamia for the Centre for Socio-Economic Studies of the Third World countries set up in 1987-88. The assistance is for a period of five years in the first instance and includes grant for staff, space, seminars, contingencies, books and journals.

The Centre is engaged in promoting research studies in strategies of planning and socio - economic development in developing countries. It investigates and documents case studies of economic and social development and examines institutional infrastructure set up for the planning and development process. It also strives to develop alternative models of development suited for the environmental conditions in different countries and organises international seminars, workshops etc. to study socio-economic development in developing countries.

6.13 **Centre for Scientific Socialism**

The Commission continued to provide assistance to the Centre for Scientific Socialism set up by the Nagarjuna University for items such as teaching staff, research staff, books and journals, seminars, conferences, publication, additional space, contingency etc.

6.14 **Centre for Regional Studies (Bhanja Literature)**

The Commission has been providing assistance to Berhampur university for the Centre of Regional Studies - Bhanja Literature set up in the Oriya department of the University. Assistance to this centre has been agreed to for a period of five years for appointment of faculty and for the purchase of books and journals and equipment. The centre is engaged in the task of collection of research materials relating to regional literature specifically of Upendra Bhanja and conducting research on Bhanja Literature.

6.15 Centre for Manipuri Studies and Research and Tribal Research

The Commission has been providing assistance to the Manipur University, Imphal for two centres set up last year viz; Centre for Manipuri Language and Literature and Centre for Tribal Studies. The Centre for Manipuri Studies and Research is conducting research on Manipuri Language and Literature, Linguistics, Manipuri Culture, Manipuri Folklore, Manuscriptology and Lexicography while the Centre for Tribal Research undertakes interdisciplinary research projects like Socio-political aspects of the tribals of Manipur, Ethno-history of Manipur, Economic development of the Tribals (with focus on tribal demography and tribal land system), and Communication among Tribals.

6.16 Special Education to Teachers for Teaching Handicapped Children

The Commission has been providing assistance to universities/ institutions for offering courses in Special Education for teachers teaching handicapped children. As on 31.3.1991, seven universities and two colleges were being assisted under the programme by way of equipment, staff, books and journals.

6.17 Support for Publication of Journals

a) **Journals in Science Education**

The Commission has been sponsoring since 1984 the publication of quarterly journals in Biology Education, Chemistry Education, Physics Education and Mathematical Education through Macmillan India Ltd, Madras.

The journals are being published under the advice of an Editorial Board for each journal. The journals provide a selection of articles throwing light on recent trends in education and research in these areas which will infuse new vigour into teaching of various subjects at the under graduate and postgraduate levels. They also provide a forum for exchange of ideas on innovation in teaching, new curricula and educational technology. The progress is reviewed from time to time by a committee constituted by the Commission.

b) **Journals in Humanities and Social Sciences**

The Commission provides assistance for the publication of journals in humanities and social sciences also. The grant is given for the publication of research journals in English or regional languages brought out by a department/institute in a particular discipline or on inter-disciplinary basis. The object of the scheme is to help a university/ department to improve the quality of its journals and to ensure regularity of their publication.

The grant under this scheme is given to meet the annual deficit subject to a maximum of Rs. 5,000/- per year for a period of five years.

6.18 Science Education Centres

The Science Education Centres are primarily meant to popularise science amongst the general public. The objective of the Science Education Centres is to generate ideas and materials for the improvement of science education at the university and school level and for the promotion of wider interest in science and scientific issues, through all means of communication. Major activities undertaken by these centres are spelt out in the report for the year 1989-90.

Presently, the Commission is providing grants to the following universities which have set up such Centres.

i. Madurai Kamraj University
ii. Delhi University
iii. Gujarat Vidyapith
iv. Rajasthan University.

The Commission provides grants towards salaries of teaching and non-teaching staff, books & journals, design and fabrication of equipment, chemicals and glassware, contingency, travel and audio-visual aids.

6.19 University Science Instrumentation Centres (USIC)

Modern instruments are becoming more and more sophisticated, hence expensive and, with limited resources available for the higher education system, liberal purchase of instruments is not possible. It is, therefore, necessary to bring them in a common pool in the university for their better use in teaching and advanced research. All this requires a well planned structure with appropriate facilities and technicians to help the academic staff of the university in all aspects of instrumentation, and needs close cooperation among all academic staff. For this purpose, the Commission introduced the scheme of USIC in individual universities. Under this scheme, the UGC supports universities to create essential facilities where all major instruments in the university could be centralised for their maximum utilization, with workshops supported by qualified personnel for fabrication, repairs and maintenance of various types of instruments. The programme also intends to train manpower at different levels and to nurture and spread the culture of instrumentation in the higher education system.

The Commission has also established Regional Instrumentation Centres at Bangalore and Bombay for supporting the USICs. The Commission provides financial assistance for staff salaries, equipment, contingencies and buildings on 100% basis. As a result of this scheme, the equipment in the universities are being put to greater use. On the basis of the performance of the USICs some of them have been upgraded from USIC Level I to Level II and from Level II to III.

As on 31.3.1991, the Commission had assisted 65 universities for setting up of USICs.

6.20 Value Oriented Education

While expressing grave concern over the erosion of essential values and increasing cynicism in society, the National Policy on Education (1986) drew attention to the need for readjustments in the curriculum in order to make education a forceful tool for the cultivation of social and moral values and making education value oriented. Value oriented education is based on our heritage, national goals and universal perceptions. The Policy also visualises a positive role for education in the development of new values through redesigning curriculum, textbooks, training and orientation of teachers and raising the social status of women.

The Commission has accordingly given high priority to value-oriented education and desired that teachers should be given necessary training in the effective methods of development of values among students so as to ensure integrated development of personality. Specific values correspond to different capacities: there are values of physical education, aesthetic education, mental education, spiritual education and so on. The Commission's endeavour is that imparting of these values should become an integral part of the teaching- learning process. As a first step, the Commission has sanctioned a project for undertaking studies relating to value-oriented education to be implemented at the Gujarat Vidyapith, Ahmedabad. Out of the approved allocation of Rs.5.04 lakhs, the Commission has released upto the end of 1990-91 grants to the tune of Rs.2.5 lakhs to the Gujarat Vidyapith for the project.

6.21 Development of Sports Infrastructure in Universities and Colleges

During the year 1990-91, the Commission paid grants amounting to Rs.371 lakhs for creation and development of sports infrastructure in the universities and colleges.

6.22 Three-Year Degree Course in Physical Education, Health Education & Sports in Universities and Multi-faculty Colleges

As stated in the report for the year 1989-90, 20 universities and 36 colleges had been approved for starting the three year degree course in Physical Education, Health Education and Sports. However, upto 1990-91, only six universities and 21 colleges could start the course for which the Commission is providing financial assistance.

6.23 Futures Studies

The Commission has been providing assistance for courses in Futures Studies at the Post M.Tech/M.Sc. level since 1989. The following ten universities were offering courses in Futures Studies as on 31st March, 1991:

1. Andhra University
2. Osmania University
3. Sri Venkateswara University
4. Madurai Kamraj University

5. Annamalai University

6. Pondicherry University

7. Kerala University

8. Bharathidasan University

9. Devi Ahilaya Vishwavidyalaya

10. Gandhi Gram Rural Institute

The Commission provides assistance for teaching staff, building, equipment, books & journals, visiting faculty and working expenses.

6.24 **Area Studies Programme**

Under this programme, the Commission provides assistance to selected universities for undertaking indepth studies relating to various aspects of different countries & regions of the world particularly of those with which India has had close and direct ties. The programme has a three-fold objective as follows:-

i. to train a body of scholars for specialised studies on problems & culture of a given area.

ii. to develop interdisciplinary research

iii. to develop teaching and research in social science disciplines introducing a comparative & inter- disciplinary dimension.

Upto the end of the year 1990-91, the Commissioin was providing financial assistance to the following 14 universities for the development of 16 Area Studies Centres:-

1. Aligarh Muslim University	- Centre of West Asian Studies
2.Banaras Hindu University	- Centre for Studies on Nepal
3.Delhi University	- Chinese & Japanese Studies
4. Calcutta University	- Centre for South East Asian Studies.
5.Bombay University	- (1) Centre of African Studies (2) Centre of Soviet Studies
6. Madras University	- Centre for South & South East Asian studies.
7.Osmania University	- Centre for Urban Development & Regional Planning.

8. Gokhale Institute of Politics & Economics	- Centre for Economics of East European Studies.
9. Rajasthan University	- South Asia Studies
10. Sri Venkateswara University	- Studies on Indo-China
11. Jawaharlal Nehru University	- (1) Centre for Gulf Studies (2) Centre for Soviet Studies
12. Goa University	- Latin American Studies
13. Andhra University	- SAARC Studies
14. Kashmir University	- Central Asian Studies.

Assistance is provided to these centres on 100% basis out of the allocation approved by the Commission for the five-year period ending 31.3.1993. This assistance is for items such as additional academic staff, fellowships/scholarships, strengthening of library facilities, field grant for research scholars to enable them to visit areas of their interest and for collection of source materials, inviting scholars to the centres etc. The working of the centres is reviewed by the Commission periodically.

6.25 Jubilee/Centenary Grants

The Commission provides assistance to universities to commemorate Jubilee and Centenary years of their establishment. The scales of assistance for this purpose are as under:

S.No.	Nature of the Celebration	Level of Assistance (in lakhs of Rupees)
1.	To celebrate centenary year after 100 years of existence	100.00
2.	To celebrate Platinum Jubliee after 75 years of existence	25.00
3.	To celebrate Diamond Jubilee after 60 years of existence	20.00
4.	To celebrate Golden Jubilee after 50 years of existence	10.00

The Commission's assistance for these purposes is available on 100% basis and is provided for meaningful programmes of capital and/or commemorative nature.

Each proposal under this programme is evaluated by the Commission on merit.

Grants to the tune of Rs.30.00 lakhs were released for the purpose during 1990-91.

6.26 Vice-Chancellors' Conference (1990)

Following the AIU Vice-Chancellers' Conference which was held in Ahmedabad on 8-9th October, 1990, the annual UGC Conference of Vice-Chancellors was held on 10th October, 1990 at Gujarat Vidyapeeth, Ahmedabad. The focal theme of the conference was "Promotion of Distance Education". In this conference, four major issues viz. status of distance education, promotion of distance education, coordination and net working of distance education and maintenance of standards of distance education were discussed. Each of the above themes was discussed by sub-groups comprising of Vice-Chancellors of different universities and the group reports were discussed in the closing session.

The major recommendations of the Conference were as under:

1. There is need to review the quality of distance education offered by different universities as well as the textual material provided by such universities to their students.

2. It is desirable to set up a council of distance education to coordinate the distance education programme in the country.

3. It was felt that at least 6% of the higher education budget be provided to distance education and the reading material may be supplemented by audio-video material.

4. The Distance education programme has to be expanded and promoted in a big way to reduce the pressure on formal system.

5. For meeting the needs of different regions, distance education programme may be promoted at the state level by supporting open universities.

6. The courses may be more diversified in nature and should be flexible enough to make it more relevant to employability.

7. There should be a mechanism for transferability between formal and distance education system and towards this end, transfer of credit system may be incorporated. In order to have optimal use of available resources, it may be desirable to have resource centres for preparation of text material and other supporting facilities like audio-video tapes etc.

8. The functionaries at the open university system/ distance education centres like teachers and administrators may be trained in newer methodologies of distance education.

There was an in-depth discussion about the present status of coordination mechanism between different institutions imparting distance education vis-a vis the role of Indira Gandhi National Open University as an apex body vested with the power of maintaining and coordinating the standards of distance education. It was suggested that since the functioning of the UGC in regard to maintenance and determination of standrads of higher education is overlapping with that of the Act of IGNOU, it will be appropriate if a Committee is set up with functionaries of IGNOU and representatives of the UGC to oversee the mechanism of maintenance and coordination of standards of distance education.

Section-7

DEVELOPMENT ASSISTANCE TO COLLEGES

7.01 The Commission has accorded high priority to the development of colleges as the college sector accounts for over 85 per cent of the total enrolment at the undergraduate level and over 55 per cent of the enrolment at the post-graduate level. The college sector plays a vital role in the maintenance of desired standards, ensuring optimum utilisation of facilities, promoting innovation and change, linking education to emerging occupational pattern and bringing about equalisation of educational opportunities for weaker sections of society, particularly the Scheduled Castes and Tribes and those belonging to educationally backward areas.

7.02 **Guidelines for formulating proposals for the Eighth Plan Development Schemes of Colleges**

The Commission's policy for development of under-graduate and post-graduate education in colleges during the Eighth Plan period has been framed keeping in view the following background:

i) The financial resources for higher education during the Eighth Plan being limited, the developmental needs of the colleges will have to be carefully identified so that the resources are mainly utilised for such programmes which can make an appreciable impact on improvement of standards through modernisation and rationalisation as well as diversification of under-graduate courses in Humanities and Social Sciences, Sciences, Commerce etc. in the colleges.

ii) The first degree level is likely to be terminal for a majority of students going in for higher education. It is, therefore, necessary that the degree courses offered should be adequately strengthened, restructured and diversified to make them worthwhile not only to the students but also to the local, regional and national needs and also for improving the employment opportunities. Sufficient freedom should be allowed to the students to choose the courses best suited to their interest and capability.

iii) Establishment of a large number of non-viable colleges with low enrolment and inadequate facilities, which have come into existence in the past, should be discouraged. In exceptional cases, new colleges could be set up in educationally backward areas where facilities for higher education do not exist.

Based on the above, the Commission's policy for the development of colleges during the 8th Plan has four main planks viz. (a) Improvement of standards and quality of education, (b) Removal of disparities and regional imbalances in higher educational facilities, (c) Restructuring and diversification of courses and (d) Granting of autonomous status to deserving colleges.

To achieve these objectives, the Commission will provide assistance to the colleges which fulfil minimum eligibility conditions and have the necessary viability and potential and are striving for better standards to enable them to meet their basic needs like books and journals including strengthening of book banks, basic scientific equipment needed for proper instruction at undergraduate level, construction of buildings, teaching and technical staff, remedial courses for the students belonging to the weaker sections of society, extension programme, examination reforms and participation of teachers in academic conferences/ workshops/seminars in India. With a view to removing disparities and regional imbalances, assistance will also be provided to the colleges catering to the needs of Scheduled Caste and Scheduled Tribe students and for intensive development of colleges situated in backward/rural/border areas. Detailed guidelines and pattern of assistance are given in *Appendix-XXVII.*

7.03 College Development Councils

A College Development Council serves as an important link between an affiliating university and the Commission in ensuring proper implementation of the schemes of the Commission meant for the college sector, and thereby ensuring proper planning and integrated development of affiliated colleges. A Council may consist of the Vice- Chancellor of the university concerned, Coordinator/ Director/Dean of the Council, a few senior teachers of the university teaching departments particularly those who have taken up COSIP/COHSSIP etc., some principals of affiliated colleges and a representative of the State Government. The total membership of the council should not exceed 30. As per the revised guidelines in force since the beginning of the Seventh Plan, the Commission's assistance towards these councils was upto 31st March, 1990. During the year 1989-90, the Commission considered the question of continuing assistance beyond 31st March, 1990 and agreed to extend the assistance upto 31st March, 1991 in the first instance. The Commission further desired that the universities should obtain assurance from respective State governments for taking over the liability after 31st March, 1995. On receipt of the assurance, the assistance by the Commission may be extended upto 31.3.1995.

During the year 1990-91 grants amounting to Rs.~~18~~.39 lakhs were released under the scheme.

7.04 Grants for General Development

Grants paid to colleges for general development and other schemes during the period 1986-87 to 1990-91 are detailed in table 7.1 below:

Table 7.1
Grants paid to Colleges for General Development and other Schemes*

(Rs. in lakhs)

Sl. No.	Name of the Scheme	1986-87	1987-88	1988-89	1989-90	1990-91
1.	Development of affiliated colleges	2670.39#	2808.58#	3334.10#	2386.59#	2096.52#
2.	College Science Improvement Programme	40.00**	56.00**	38.60**	27.99**	36.05**
3.	College Humanities & Social Sciences Improvement Programme	189.97**	161.15**	116.25**	173.52**	144.12**
4.	Centenary Grants	20.57	50.00	--	12.00	--

* A statement of development grants paid to colleges(Statewise) during 1990-91 is given in *Appendix -XXVIII.*

\# Includes assistance to UG/PG Colleges, Teacher's Training Colleges and Basic Assistance.

** includes ULP also.

Note: Grants for the Development of Affiliated Colleges shown at Sl.No.1 in the table above do not include grants paid to colleges by way of Special Assistance for the Development of Libraries as one-time grant given during 1989-90 (18.75 lakhs) and 1990-91 (5.75 lakhs).

7.05 Autonomous Colleges

The Commission continued its efforts to promote and encourage the concept of autonomy through its scheme of autonomous colleges. As a result of continuous follow-up, 9 more colleges were granted autonomous status during the year under report, thus bringing the total number of such colleges to 106 as on 31st March, 1991. The following steps were taken during the year to extend coverage of autonomous colleges:

i) Assistance was provided for a number of seminars at universities and the NIEPA to create awareness;

ii) Dialogue was continued with State governments to amend the Acts of the universities to enable them to allow autonomy to colleges and also expedite approval to the statutes framed by universities.

iii) It was stressed upon the universities to expedite formulation of statutes to regulate conferment of autonomous status on colleges and expeditute examination of proposals by the Standing Committee.

A Committee has been set up for advising and monitoring the implementation of the scheme of autonomous colleges. With a view to ensure smooth working of the autonomous colleges and establish their creditibility, the Commission took the following steps during the year:

i) Autonomous colleges were requested to bring out annual report highlighting their achievements, academic innovation etc. as a mechanism to evaluate their performance and assess accountability.

ii) Universities were advised to hold half-yearly meetings with principals of autonomous colleges to sort out matters of coordination.

iii) **State governments were requested to set up Coordination Committees consisting of Vice-Chancellors and Principals of some autonomous colleges so that autonomous colleges develop in a proper manner.**

7.06 Plan assistance to Delhi Colleges

Plan assistance provided to Delhi Colleges during the year 1990-91 was as follows :

(a) An amount of Rs. 23.18 lakhs was provided to eight colleges for the implementation of the scheme of 'Restructuring of Undergrauate Courses'.

(b) An amount of Rs. 4.18 lakhs was provided to four Delhi Colleges under the scheme of 'Basic Assistance' as per details given below:

1) Books and Journals : Rs. 1.45 lakhs
2) Equipment : Rs. 2.73 lakhs

(c) An amount of Rs. 50.55 lakhs was provided under the scheme of 'Development of Undergraduate Education' for books and journals, equipment and buildings as per details given below:

1) Books and Journals : Rs. 16.56 lakhs
2) Equipment : Rs. 18.36 lakhs
3) Buildings : Rs. 15.63 lakhs

(d) An amount of Rs. 155.79 lakhs was provided to 17 colleges for construction/extension of buildings.

(e) An amount of Rs. 9.86 lakhs was provided to 33 colleges for meeting 50 per cent of the expenditure incurred by teachers towards international air passage, TA/DA etc. for attending international conferences/seminars/ symposia abroad.

7.07 **Centenary Grants**

The Commission provides assistance to colleges @ Rs.25 lakhs and Rs.30 lakhs to celebrate 100 years and 150 years respectively of their establishment.

The Commission's assistance for this purpose is available on 100 per cent basis and is provided for meaningful programmes of capital and/or commemorative nature. Each proposal is evaluated by the Commission on merit.

SECTION-8

DEVELOPMENT OF INSTITUTIONS DEEMED TO BE UNIVERSITIES

8.01 Section 3 of the UGC Act provides for declaring an instituion of higher education, other than a university, as an 'institution deemed to be university' which is having more specific and limited functions and scope and is doing work of a high standard in an academic field. An institution deemed to be a university enjoys the academic status and privileges of a university and is generally expected to aim at strengthening its activities in its field of specialization rather than make efforts towards growing into multi-faculty university of the general type.

8.02 During the year 1990-91, one institutionviz. Jain Viswa Bharati Institute, Landun (Rajasthan) was granted the status of an institution deemed to be university. Thus, the total number of institutions deemed to be universities was 29 as on 31st March,1991. A list of these institutions giving their enrolment , year of establishment and the year of their recognition as 'institution deemed to be university' is given in Table 8.1 below.

Table 8.1

Sl. No.	Name of the Institution	Year of Establish-ment	Year during which reco-gnised	Enrolment during 1990-91
1	2	3	4	5
1.	Indian Institute of Science (Bangalore)	1909	1958	1457
2.	Indian Agricultural Research Institute (New Delhi)	1905	1958	698
3.	Gurukul Kangri Vishwa-vidyalaya (Hardwar)	1900	1962	850*
4.	Gujarat Vidyapith (Ahmedabad)	1920	1963	920
5.	Tata Institute of Social Sciences (Bombay)	1936	1964	252
6.	Birla Institute of Technology and Science (Pilani)	1964	1964	3096

1	2	3	4	5
7.	Central Institute of English and Foreign Languages (Hyderabad)	1958	1973	1671
8.	Indian School of Mines (Dhanbad)	1926	1967	315
9.	Gandhigram Rural Institute (Gandhigram)	1956	1976	1268
10.	School of Planning and Architecture (New Delhi)	1959	1979	653
11.	Dayalbagh Educational Institute (Agra)	1973	1981	1991
12.	Sri Sathya Sai Institute of Higher Learning (Prasanthi Nilayam)	1981	1981	867
13.	Banasthali Vidyapith (Banasthali)	1935	1983	1491
14.	Indian Veterinary Research Institute (Izatnagar)	1913	1983	147
15.	International Institute for Population Science (Bombay)	1956	1985	76
16.	Thapar Institute of Engg. and Technology (Patiala)	1956	1985	996
17.	Birla Institute of Technology, Mesra(Ranchi)	1955	1986	1467
18	Rajasthan Vidyapith (Udaipur)	1937	1987	NA #
19.	Tilak Maharashtra Vidyapith (Pune)	1921	1987	4947

1	2	3	4	5
20.	Rashtriya Sanskrit Vidyapith (Tirupati)	NA	1987	NA
21.	Shri Lal Bahadur Shastri Rashtriya Vidyapith (New Delhi)	1962	1987	695
22.	Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore	1957	1988	2299
23.	National Dairy Research Institute, Karnal (Haryana)	1957	1989	318
24.	Central Institute of Higher Tibetan Studies, Sarnath, Varanasi (UP)	1967	1988	48
25.	Central Institute of Fisheries Education, Varsova, Bombay	1961	1989	90
26.	National Museum Institute of History of Art, Conservation & Museology.	1989	1989	205
27.	Deccan College Post Graduate and Research Institute, Pune	1939	1990	118
28.	Jamia Hamdard, New Delhi	1962	1989	NA
29.	Jain Vishwa Bharati Institute, Landun	1991	1991	37

* Including 160 private students of M.A./M.Sc.

8.03 Maintenance Grants

The quantum of grants paid to institutions deemed to be universities during 1986-87 to 1990-91 is given in Table 8.2 below:

Table 8.2

	1986-87	1987-88	1988-89	1989-90	1990-91
	(Grants paid in lakhs of Rupees)				
Institutions deemed to be Universities	1954.03	2490.00	2568.72 6.53*	2475.75	2983.01

* By adjustment

8.04 Major Achievements:

Major achievements and programmes of 18 the deemed universities as reported by them during 1990-91 are given below:

i) Indian Institute of Science, Bangalore:

The Institute conducts 1.5 years Master of Engineering Programmes in the departments of Computer Science and Automation, Electrical Communication Engineering, Electrical Engineering, Higher Voltage Engineering, Aerospace Engineering, Chemical Enginering, Civil Engineering, Mechanical Engineering, Metallurgy and Master of Technology Programme in the departments of Management Studies, Instrument Technology and the Centre for Electronics Design and Technology.

Master of Engineering (Integrated) Programme (for first class Science graduates) of four years duration is conducted in the departments of Electrical Communication Engineering, Electrical Engineering, Mechanical Engineering, Metallurgy and Computer Science and Automation.

The institute introduced an integrated Ph.D.programme in Chemistry during the year 1990-91.

Several of the on going research programmes at the Institute are generally interdisciplinary in nature.

Admission was made during the academic year 1990-91 under the Special Research Programme in the following areas:

Deptt.	Areas
EC	Optical waveguides for Integrated Optics
MT	The Genesis of Nanophase Materials and Studies on Surface & Interface Effects in them.
MT	Solid State Sensors
MT	Characteristics of Zinc Oxide composites for overvoltage suppression.
MTT	Microstructual Evolution during Recrystallization and Crystallization: Simulation and Validation.

The Institute has taken up production of video lectures on topics of current interest. The topics covered so far are Fifth Generation computer Systems, Technology for Fifth Generation Computer systems, Super conductivity materials and applications, Supercomputers, the Mathematics of Ramannujan, Thyristors, Paraller computing, Digital Signal Processing, Personal computers, Industrial Noise control, Automative Noise control, Design of Heat Exchangers etc. Action has already been taken to make these tapes available to interested persons and institutions. Six lecture tapes are ready for distribution on payment. A 400 m^2 solar pond is constructed at Masur (near Kumta in Uttara Kannada District) for supply of hot water to a rural community. This solar pond attained a temperature of 80 C. It has demostrated the feasibility of operating solar ponds in a periodic mode.

ii) **Birla Institute of Technology and Science, Pilani (Rajasthan)**

The Institute concluded its year long Silver Jubilee Celebrations with a function on 9th September, 1990 with the President of India Shri R.Venkataraman as the Chief Guest. On this occasion, the President inaugurated a UGC supported "Centre for Research on Educational Innovations and Institutional Development" and released a book entitled "An Improbable Achievement: BITS- A Profile of Change". The University-Industry Linkage of the Institute was further consolidated during the year through its Practice School (PS), Technology Innovation Centre (TIC), Off-campus Ph.D. and Distance Learning programmes. The PS programme extended from national to international plane with a view to provide excellent projects to the students. A new BS station was opened at Uniformed Services University of Health Sciences (USUHS), Behesda, Maryland, U.S.A.for the students of Bio-sciences and Pharmacy. Negotiations have been started with some of the U.S. universities for faculty exchange and collabroative research projects and educational development. Rutgers University, Arizona State University, University for Maryland, University of Missouri, Columbia, besides USUHS, are a few universities with whom preliminary discussions have been held.

In its endeavour towards research and development, the Institute carried on work on several sponsored projects from different agencies. Two of these projects were sponsored by UGC and another by CSIR. In addition, the Institute also received financial support for nine projects from the Ministry of Human Resource Development during the year. The faculty members presented over 45 papers in various conferences and published over 30 research papers in different journals.

The following new centres were started during the year at the Institute:

a) Centre for Research on Educational Innovation and Institutional Development.

b) Centre for Software Development, and

c) Consumer Electronics Centre

iii) **Tata Institute of Social Sciences**

The following new courses were introduced during 1990-91

1) Criminal Justice System in India

2) Income/Employment Generation Programmes and their Management

3) Therapeutic Work with Individuals, Families & Groups

4) Social Work in the field of Mental Health

5) Group Process in Therapy & Rehabilitaiton

6) Social Case Work

7) Management of Occupational Health & Safety.

The institute offers seven inter-disciplinary programmes of teaching and research consisting of Integrated social work practice and six optional courses in the departments of social work.

TISS Social Service Centre organised a variety of programmes during the year such as Dental check up, Cancer Detection Camp, Children's Day, Co-operative Actvity etc. to supplement income of the service staff women.

The activities of the rural campus were initiated in Tuljapur town and its neighbouring villages in July, 1988. During the year, the staff size increased to six social workers, one reader, one horticulturist, and one rural engineer operating in seven villages of the taluka. An awareness programme with specific reference to women's issues was held in June, 1989 which was attended by 500 women. Programmes related to land and water issues were also initiated during the year.

LIBRA

With the financial assistance from the Ministry of Welfare, Government of India, the Institute set up a Student Service Cell to promote the special interests of students from the Scheduled Castes/Tribes and others whose educational experience places them in the Insitutute at a disadvantage with respect to the medium of instruction and other academic requirements. Based on the felt needs and problems of the students, the Cell initiated various action projects. Important among these are educational guidance, assistance in personal and social adjustment, concurrent, part-time, paid work assignments in the Institute and vacation job placements in organisations for the first year students. The Cell has met with some success in providing information to out-going SC/ST students on various placement opportunities and helped them to apply for appropriate jobs. All the 20 students (14 SC and 6 ST) found employment, either in industry or welfare organisations on completion of their M.A.course in 1989-90 Those of 1990-91 batch are in the process of getting their placement.

Three Courses viz (1) Women and Work (ii) Women and Law (iii) Status and Health of Women, are offered by the Unit for Women's Studies at the institute. The Unit also undertakes other activities such as research and publications.

iv) **Gurukul Kangri Vishwavidyalaya, Hardwar**

Interaction with the Society and neighbourhood

Programmes for improving the conditions of backward classes and low income groups have been undertaken by the Adult and continuing Education department of the Vishvidyalaya in nearby rural areas. Also, a programme for providing information on Sulabh Sauchalaya, Population Education, Family Planning, Health and Sanitation etc. has been undertaken.

This department has paid special attention towards women literacy through its illiteracy removal programme.

v) **Gujarat Vidyapith, Ahmedabad**

The following new courses were introduced during 1990-91.

(i) M.Phil in Gandhian Studies.

(ii) P.G. Certificate Course in Tamil & Telugu.

(iii) Post-doctoral programme of D.Litt in Gandhian Studies and Buddhist Studies.

The inter-disciplinary research project on Value Education made further progress during the year. Also, it was decided to resume the publication of an Inter-disciplinary journal of Peace Studies called 'SETU' and start a post-doctoral programme of D.Litt in Gandhian Studies and Buddhist Studies.

Interaction with the Society and neighbourhood is brought about by students of M.S.W. by doing field work in Gota Village for two hours. There is a Community Hall in the field work centre. An additional field work centre in village Thaltej has been started. Five villages around the rural campus have been selected for intensive human resource development through

Students's campus, Adult Literacy classes and Mass Functional Literacy (Saksharata Abhiyan) Programme. Jan Shikshan Nilayams as well as Population Education clubs are attached to these field work centres.

The department of Adult/Countinuing Education of Gujarat Vidyapith has developed extensive programme of Adult Education and Population Education in 75 villages of Gandhinagar. The work of basic literacy for 15-35 age group has been completed during the year in all the villages of Gandhinagar. The Chief Minister of Gujarat declared the District fully literate and publicly acknowledged the active role of Gujarat Vidyapith in this work. The deparptment of Adult Education of the Gujarat Vidyapith is promoting total literacy campaign in 32 Talukas which will cover about 3500 villages.

vi) **Gandhigram Rural Institute, Gandhigram**

During the academic year 1990-91 the following new courses were started:

(i) M.Sc. Mathematics and Computer Application

(ii) P.G. Diploma in Computer Application

(iii) P.G.Diploma in Archives & Documentation

(iv) Certificate course in Multipurpose Male Health Worker.

The courses at U.G., P.G. and M.Phil levels are multidisciplinary in nature. They have an in-built system of providing vast scope for extension activities and women's development through inter and intra- departmental discussions and consultations.

The extension department of the institute is committed to rural social transformation following the method of Participatory Rural Appraisal (PRA). Through this method the problems of villages are identified and spelt out by the villagers who themselves indicate the solution.

Nearly 60 Mahila Mandals are functioning with the help of different agencies-both governmental and non-governmental. The involvement of women in programmes like Mother and Child Care, Health and Sanitaton, Drinking Water Supply, Income Generating Activity for Women Exclusively, has yielded good results.

The Government of Tamilnadu has approved the setting up of a Centre for Coaching Backward Class Candidates for IAS/APS examinations and sanctioned a sum of Rs.60,000/- for the purpose. Coaching classes for the year 1990-91 commenced from 2.1.1991 and concluded on 31.5.1991 and 23 candidates (13 BC and 10 MBC) attended these classes.

Regular training in tailoring, mat-weaving and knitting is being given to women in the service villages of GRI through the Extension/Adult Education and Krishi Vigyan Kendra Channels with a view to provide them self-employment opportunities.

vii) **Central Institute of English & Foreign Languages, Hyderabad**

The Institute is entrusted with the responsibility of improving the standards of the teaching of English and Foreign Languages in the country.

The foliwing new courses were introduced during 1990- 91 as part of the regular academic programmes of the Institute:

(i) M.A. (German)- full-time

(ii) "Introductory Sociolinguistics" PGDTE/DES (2nd Semester optional).

(iii) Certificate of Proficiency in French (intensive)

(iv) Diploma in French (intensive)

The Institute produced a variety of teaching materials viz:

(i) Two course books - 'Learning English through Mathematics' and 'Learning English through Science' for Navodaya Vidyalaya Samiti Project.

(ii) **The EMRC at the Institute continued to make significant contribution to the Country-wide class-room project of the UGC. 76 programmes were sent to the UGC for telecast during the year.**

The Centre received a prize in Language, Literature and Communication Section and a certificate of merit in editing.

(iii) The Department of Radio, TV and Cinematography produced radio programmes for schools for broadcast by the All India Radio. The Institute has been functioning as a nodal agency in the area of foreign language teaching. As a nodal agency, the Institute's work includes;

(a) preparation of instructional and reference materials.

(b) designing of distance education courses and short, need based courses, and

(c) Collection of data regarding resources currently available in the country for the teaching of foreign languages.

viii) **Dayalbagh Educational Institute, Dayalbagh, Agra**

The Institute has switched over to 3-year Degree Course (Honours) and the first batch came out from the session 1990-91. The Institute has always been a pioneer in assisting and encouraging women and rural community to participate in wider social activities. The Centre for Adult and Continuing Education organised various programmes of adult literacy, health awareness and child care, cottage and handicraft production etc. in the neighbouring villages.

ix) **Sri Sathya Sai Institute of Higher Learning**

During the year, the Institute carried on vigorously with its interdisciplinary programmes teaching & research viz; Medicinal Chemistry, Topographical methods for study of c sumers preferences, Bio-modeling etc. All the students and staff regularly participate social services such as community hygiene, cleaning of premises etc. The research staf the Institute was continuously engaged in efforts to bring about improvement in water a soil of the Prasanthinilayam.

The Institute also has an operational model in which all curricular and co-curricular activiti during almost all days of the year point directly towards the achievement of academ excellence combined with intuitive development. The Institute continued to make educatic a foreceful fool for the cultivation of social and moral values.

x) **Banasthali Vidyapith, Rajasthan**

In order to promote inter-disciplinary programmes of teaching and research, the Vidyapit has introduced M.Phil. Programme in Social Sciences (History, Economics, Political Scienc and Sociology) and English (Language Teaching).

The Adult and Continuing Education Department is running 63 Adult Education Centres with an enrolment of 1681. Out of these, 673 are women, 573 (343 men and 230 women) belong to Scheduled Castes and Tribes. Besides, four Jan Shikshan Nilayams are also being run. The Vidyapith teams took part in Inter- University tournaments in Table-tennis and Basket ball.

370 students are enrolled as Guides and 125 as Rangers.

xi) **Thapar Institute of Engineering & Technology, Patiala**

The Institute introduced the following new courses during 1990-91

(i) M.E. Civil (Geo-Technical Engg.)
(ii) M.E. Industrial Engg.
(iii) M.Sc. (Materials Science)

The undergraduate curricula provide a sound base through a core programme, covering humanities, science, engineering and technical arts.

The Civil Engg. Deptt. is also doing consultancy work. It is engaged in Topographical and Geotechnical studies for Longowal Institute; Structural Design of KPM Trust Building at Malerkotta, Performance study of a Starch Mill, Effluents Treatment Plan in Andhra Pradesh and Design of Over- Head Water Tanks.

Close collaboration with industries/institutions/ departments in the region has been improved further. Two committees, one for the Security Arrangements and the other for the Beautification of Campus have been constituted to improve/beautify climate and environment of the campus.

xii) **Birla Institute of Technology, Mesra, Ranchi**

During the year 1990-91, the Institute strengthened the infrastructure for several areas of interdisciplinary research and development.

A 'Research Cell' for studies on 'History of Science' has been established at the Institute. This Cell is continuously growing with richer collection of books, journals and other materials for initiating investigation for research work. The Cell is recognised by the Indian National Science Academy for supervising and guiding research.

In accordace with growth and development schemes of the U.G.C. and the Government of India, the Institute is keeping pace with the latest technological advances in identified areas of emerging technology and is creating and strengthening the necessary infrastructure for education, research and training. A Microprocessor Development Centre has already established a good rapport with several public & private sector undertakings for design and development of instrumentation and control systems for real time computer controls. During the year the Institute has also made advanced studies in Artificial Intelligence and Robot Technology; these are now being moved from the research domain to the solution of practical industrial problems.

New courses such as B.Tech. (Architecture), B.Tech. Chemical Engg. (Polymer Specialisation), M.Sc. (Electronics) especially for girl students, post-graduate courses in Applied Sciences and Information Sciences have been introduced.

Research & Development Projects on Fibre reinforced cement sheets, design and implementation of low cost housing, Water Management, Wind Mill, Bio-gas energy, and Geo-thermal energy have made considerable progress.

A specific project on computer vision and touch sensing system for aiding the blind persons has been undertaken by the Institute. Research work in Fibre Optics and Optical Communication is growing very fast. Ergo-nomics and Computer Aided design and Manufacturing, which are emerging areas, have been well established.

xiii) **Central Institute of Fisheries Education, Varsova, Bombay**

The CIFE is offering the following post-graduate courses at its various centres:

(i) Two year post-graduate Diploma in Fisheries Science at Bombay.

(ii) One year Certificate Course in Inland Fisheries Administration and Management at Barrackpore (West Bengal)

(iii) One year Certificate in Fisheries Extension Techniques at Kakinada.

(iv) One year Certificate Course for Inland Fisheries Operatives at Chinhat, Lucknow

(v) M.Sc. (Inland Fisheries Administration and Management) at Barrackpore (West Bengal)

The following new courses leading to M.Sc. in Fisheries science has been introduced during 1990-91, viz., M.Sc. (Fisheries Management) at the CIFE, Bombay.

The Ph.D. programmes introduced during 1990-91 at CIFE, Bombay in various disciplines of Fisheries Science are as follows:

(i) Ph.D.in Inland Fisheries

(ii) Ph.D. in Marine Fisheries

(iii) Ph.D.in Fish Processing

(iv) Ph.D. in Fisheries Statistics

(v) Ph.D.in Fisheries Economics

(vi) Ph.D.in Fisheries Extension

The Institute also conducted 13 short-term need-based fishery technology training programmes involving 255 participants. Sixteen research projects have been undertaken in various disciplines of fisheries science including two sponsored research-projects by the Department of Ocean Development (D.O.D.), New Delhi and National Bank for Agriculture and Rural Development (NABARD), Bombay.

xiv) **Tilak Maharashtra Vidyapeeth, Pune**

The following courses were introduced during 1990-91;

(i) Certificate Course in Marathi Language.

(ii) Vidyanishnat (M.Phil) Indology.

(iii) Visharad (B.A.) Sanskrit.

During 1990-91 a certificate course in Marathi Language for non-Marathi speaking and foreign students was introduced and conducted a Balmukund Sanskrit Mahavidyalaya, in collaboration with the Associated colleges of Midwest, USA. There were 17 American students admitted to this course. A national seminar on "Ancient Indian Political Thought" was arranged in January 1991. A number of scholars read papers and participated in the discussion. Also a seminar was held on "Social Reform Movement in Modern Maharashtra" at the Nehru Institute of Social Studies.

During Dr. B.R. Ambedkar's birth centenary year, a series of four lectures was organised during January-February, 1991. These lectures were delivered by eminent professors.

xv) **Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore**

During the year 1990-91, the following new courses were introduced by the Institute:

(i) An interdisciplinary M.Sc. Life Sciences Degree Course by the departments of Zoology and Botany.

(ii) An interdisciplinary MA Development Language and Literature Course by the departments of Tamil and English.

(iii) A post-graduate diploma course in Medical Laboratory Technology by the department of Biochemistry.

The Department of Food Science and Nutrition conducted several demonstrations on popularisation of wheat products in five districts of Tamil Nadu viz. Coimbatore, Nilgiris, Periar, Salem and Trichy at the invitation of the cooperative department of the Government of Tamil Nadu.

The Institute has intimate contact with the society and neighbourhood through programmes like the Community Social Service Scheme Activities, Adult Literacy Work, National Service Scheme and several project works such as Popularisation of Wheat Products. Improvement of Rural Family storages, collaborative study on young women's health & development and motivating rural poor family for better living.

The institute has entered into an agreement with the Oregon State University (OSU), Corvallis, Oregon, USA for exchange of professors between the two universities, six from each side between 1990-92. The faculty exchange will foster research linkages with multidisciplinary interest focussing on the 'Household Dimension in National Development'. The visiting USA faculty will train faculty at the institution in qualitative research methods and application of micro-computers in social science research.

The University Grants Commission has commissioned the Avinashilingam Institute to produce 240 lessons of 25-30 minutes duration each in Home Science for the undegraduate classes. The necessary equipments have been imported and the Audio Video Production Laboratory has been set up. The needed technical staff have been hired and the Institute staff have been given training to produce the lessons. About 220 lessons have already been completed.

xvi) **Rajasthan Vidyapeeth, Udaipur**

The process of integrating teaching and evaluation undertaken by the Vidyapeeth was further consolidated & improved during the year under report. The object of this integration is to get the students evaluated by the teachers teaching the subject/paper.

The Vidyapeeth lays emphasis on community services and extension programmes. This activity is area-based and is presently confined to two blocks-Salumber and Sarada of the Udaipur district. The students as well as the teachers are engaged in this activity. Besides,

the Vidyapeeth has three population clubs, two planning forums, ten Nilayams, ten continuing centres and 250 adult education centres. The Vidyapeeth also conducts various non-formal education programmes such as "Shiksha Karma Yojana" etc.

The Vidyapeeth also proposes to integrate research and teaching. For this purpose it has introduced a compulsory paper viz. "Research and Library Skills- Report Writing" at the postgraduate level.

The research Institute of the Vidyapeeth is converted into a special Institute as the 'Institute of Rajasthan Studies".

xvii) **International Institute for Population Science, Deonar, Bombay**

The Institute at present conducts the following courses:

(i) Certificate in population Studies of one year duration.

(ii) Master of Population Studies of one year duration.

(iii) Master of Population Studies (Bridge Course) of one or two Semesters.

(iv) Master of Philosophy in Population Studies of one year duration.

(v) Ph.D. in Population Studies.

In addition, a one-year diploma course in Health Education is conducted by the Family Welfare Training and Research Centre under the auspices of the Institute.

A number of seminars and conferences were arranged by the Institute during 1990-91. Some of the important ones are mentioned below:

(i) Symposium on "Bombay in 2001".

(ii) All-India Seminar on the Status of Women and Demographic Change in India.

(iii) All India State Demographers' Conference.

During the past 34 years, 1172 trainees from 34 different countries including 30 countries of Asia and the Pacific region, two countries of Africa and one each of North America and Yemen have been trained at the Institute.

xviii) **National Dairy Research Institute, Karnal (Haryana)**

The following divisions/sections of this Institute viz. Dairy Extension, Krishi Vigyan Kendra, and Operational Research Project were extensively engaged in interacting with the society and neighbourhood for improving the economy of rural people by providing HYV seeds, adopting crossbreeding, artificial insemination, preparation of milk products such as cheese, butter, dahi, kheer and paneer etc.

Facilities for insemination, pregnancy diagnosis, calf care, vaccination treatment of animals in nine adopted villages and a part of Karnal town have been provided consultancy on various aspect of milk and milk products.

A training programme on Artificial Insemination for a period of three months is given by the Krishi Vigyan Kendra for farmers to keep their animals fit for health and save their animals fjrom dreadful diseases. Fish farming and Bee-keeping training programme are also conducted to generate income and employment opportunities for rural people.

8.05 A statement indicating the grants paid to institutions deemed to be universities during 1990-91 under Non-Plan and Plan is given in Table 8.3 below:

Table 8.3

	Non-Plan	Plan	Total
	(Rupees in lakhs)		
1. Avinashilingam Institute for Home Science	60.00	13.55	73.55
2. Banasthali Vidyapith	-	39.07	39.07
3. Birla Institute of Technology and Science	0.19	64.07	64.26
4. Birla Institute of Technology	0.12	39.80	39.92
5. Central Institute of English and Foreign Languages	233.35	24.55	257.90
6. Central Institute of Higher Tibetan Studies	-	0.30	0.30
7. Dayal Bagh Educational Institute	59.99	52.25 0.28*	112.24 0.28*
8. Deccan College Institute of Post-graduate Education and Research	0.16	1.01	1.17
9. Gandhigram Rural Institute	159.00	28.20	187.20
10. Gujarat Vidyapith	156.63	25.67	182.30
11. Gurukul Kangri Vishwavidylaya	99.39	14.09	113.48
12. Indian Agri. Research Institute	0.16	0.23	0.39

	Non-Plan	Plan	Total
13. Indian Institute of Science	1654.56	658.80	2313.36
14. Indian School of Mines	425.97	76.37	502.34
15.Jamia Hamdard	19.69 1.53*	5.77	25.46 1.53*
16. Rajasthan Vidyapith	-	29.35	29.35
17.School of Planning and Architecture	-	0.80	0.80
18. Sri Sathya Sai Institute of Higher Learning	-	45.32	45.32
19. Sh. Lal Bahadur Shastri Rashtriya Sanskrit Vidyapith, New Delhi.	0.04	0.06	0.10
20. Tata Institute of Social Sciences	161.40	60.64	222.04
21. Thapar institute of Engineering and Technology	-	60.44	60.44
22. Tilak Maharashtra Vidyapith	-	18.68	18.68
Total:	3030.65 1.53*	1259.02 0.28*	4289.67 1.81*

* By adjustment.

Section-9

NON-PLAN GRANTS TO UNIVERSITIES

9.01 Maintenance grants are paid to the central universities in terms of the statutory provision under section 12(b) of the UGC Act to meet recurring expenditure of all faculties on items such as salaries of staff (both teaching and non-teaching), maintenance of laboratories, libraries, buildings etc. In the case of Aligarh Muslim University and the Banaras Hindu University, such grants are also given for the maintenance of hospitals attached to the medical colleges of these universities.

In addition, non-plan grants are paid both to the central, as well as state universities for specific purposes subject to the agreed levels of expenditure. Non-plan grants include grants for scholarships and fellowships under engineering and technology, teacher fellowships, national fellowships, national associateships, national lectures, junior research fellowships and research associateships. These also include grants for fellowships and awards reimbursed to non-university institutions (like the IITs, PG Institute of Medical Education & Research, NCERT etc.).

Non-plan grants paid under various schemes during 1990-91 are given in Table 9.1 below:

Table 9.1

Statement of non-plan grants paid under various schemes during 1990-91

S.No.	Purpose	Amount
		(Rs. in lakhs)
1.	Maintenance grants to Universities*	14,865.09
2.	Maintenance grants to Institutions deemed to be universities	2,983.01
3.	Maintenance grants to Anna and Roorkee universities for specific purposes	98.42
4.	Maintenance grants to Constituent/ Affiliated Colleges of Delhi University	5,417.62

S.No.	Purpose	Amount
5.	Maintenance grants to Constituent/ Affiliated Colleges of B.H.U.	52.59
6.	House Building Advance to Institutions deemed to be universities and Central Universities.	**
7.	Teacher Award for schemes like Teacher Fellowship, National Fellowship/Associateship, National Lecturers, Retired Teachers, Emeritus Fellowship etc.	39.82
8.	ResearchFellowships/Associateships	447.44
9.	Scholarships/Fellowships under Engg. & Tech.	169.83
10.	Reimbursed to non-University Institutions	17.49
11.	Mass Media Centres	250.79
		24,342.10@

* These include grants to central universities and Delhi Colleges of Rs.996.00 and Rs.454.22 lakhs respectively on account of advance instalment for 1991-92 for meeting expenditure on salaries of March, 1991 payable on 1.4.1991.

** Since 1990-91 this is being paid under Plan grants.

@ This does not include Rs.477.65 lakhs released towards UGC administration charges, pay of officers, establishment etc.

9.02 **Non-plan Grants to Central Universities**

Grants paid by the Commission towards the maintenance of central universities for the years 1986-87 to 1990-91 are indicated in Table 9.2. It will be seen that the quantum of grants paid year after year has been increasing. During 1990-91, grants amounting to Rs.14,865.09 lakhs were released towards maintenance of the central universities.

Table 9.2

Non-Plan Grants to Central Universities

(Rupees in lakhs)

S.No. University	1986-87	1987-88	1988-89	1989-90	1990-91
1. Aligarh Muslim University	1888.62	2540.05	2748.06	2912.95	3383.27
2. Banaras Hindu University	2811.65	3366.15	3394.04	3559.60	4112.32
3. Delhi University	1427.02	1655.82	1889.25	1926.58	2471.07
4. Hyderabad University	361.08	423.75	489.01	567.60	673.62
5. Jawahar Lal Nehru University	735.27	952.20	1023.84	1130.23	1315.62
6. North Eastern Hill University	669.85	752.60	843.00	884.98	986.07
7. Visva Bharati	521.11	713.10	773.40	832.32	957.64
8. Jamia Millia	-	-	30.00	526.58	679.46
9. Pondicherry	-	-	-	-	286.02
Total:	8414.60	10403.67	11190.60	12340.84	14865.09

The maintenance expenditure of the medical colleges at the Aligarh Muslim University and the Banaras Hindu University and the attached hospitals was met out of block grants of the university, whereas in the case of University College of Medical Sciences, Delhi University, the maintenance grant was paid directly to the institution.

9.03 Maintenance Grants to Central Universities, Institutions deemed to be Universities and State Universities

In compliance with the observations made by the Public Accounts Committee in its 73rd report, a statement showing maintenance grants (Non-Plan) in respect of central universities, institutions deemed to be universities and such of the state universities which have furnished the information for the year 1988-89 is given in *Appendix-XXIX.*

9.04 **Plan Grant for Creation of revolving fund for House Building Advance for Central Universities**

With a view to facilitate the employees (teaching and non- teaching) of central universities to construct their own houses, the Commission initiated a scheme of creation of revolving fund by the universities to make payment towards House Building Advance to their employees. Under the scheme, the Commission provides grant on an annual basis keeping in view the strength of university employees, number of applicants and the availability of funds. Earlier, this grant was paid under non-plan. However, from the year 1990-91, it will be paid as Plan grant. During 1990-91, the Commission released a grant of Rs.145 lakhs to nine central universities for this purpose.

SECTION-10

FACULTY IMPROVEMENT PROGRAMME

10.01 The Commission has been giving financial assistance for various programmes of faculty improvement which provide opportunities to teachers to keep in touch with the developments in their fields of study and research and to interact with experts in their subject areas and related fields. These programmes aim at improving the professional competence of teachers so that they can impart high quality instructional programmes and contribute to raising standards of higher education. A resume of these programmes supported by the Commission during 1990-91 is given below.

10.02 **Seminars, Symposia, Refresher Courses, Workshops etc.**

The Commission provides assistance to universities and colleges for organising seminars, symposia, refresher courses, workshops etc. in accordance with approved norms. Such programmes are now being organised under the scheme of 'Unassigned Grants' and assistance ranging from Rs.1.5 lakhs to Rs.4.00 lakhs is provided annually to each university on the basis of the faculty strength. The number of proposals accepted by the Commission for organising such programmes during 1990-91 is given below:

Sl. No.	Programme	Humanities & Social Sciences	Sciences	Total
1.	Seminars	42	22	64
2.	Symposia	3	12	15
3.	Workshops	6	10	16
	Total:	51	44	95

The Commission also provides TA/DA to university and college teachers to participate in similar activities organised by non-university institutions like the A.I.I.M.S., N.C.E.R.T., N.I.E.P.A. etc.

10.03 **Conferences**

The Commission provides a token contribution ranging from Rs.5,000/- to Rs.30,000/- to universities and colleges for organising conferences at the state, regional, all-India and international levels. These conferences provide an opportunity to faculty members and

researchers to discuss their research findings. Dur ng the year 1990-91, the Commission provided assistance for organising 49 conferences of which eight were at the State level, three at regional level, thirty one at all-India level and seven at international level.

10.04 **Strengthening the Teaching of English Language**

The Commission continued to provide financial assistance to universities for organising specialised Summer Institutes for English Language Teaching (ELT) in collaboration with the British Council and the Central Institute of English & Foreign Languages (CIEFL), Hyderabad. Assistance by the Commission is provided for items such as books, equipment and staff. The British Council provides experts for these seminars while the CIEFL organises pre-institute workshops for the resource persons. The Commission has identified 15 universities as ELT Centres for the purpose.

10.05 **Academic Staff College Scheme**

Phase I : Orientation Programmes for newly appointed lecturers

The scheme was initiated by the Commission in 1987-88 when 48 Academic Staff Colleges (ASC) were approved to organise orientation programmes for newly appointed lecturers in universities and colleges. The scheme aims at enhancing the motivation of teachers through systematic orientation in specific subjects and techniques as well as methodologies and thereby inculcate in the teacher the right kind of values which would in turn encourage him to take initiative for innovation and creative work. Each ASC is expected to organise five or six orientation programmes of four weeks duration each in a year. While 85-90 per cent of the teachers are to be enrolled from the notified catchment area** of the ASC, the remaining 10-15 per cent can be invited from outside the State on an all- India basis. Out of 48 ASCs, 46 had started organising orientation programmes till the end of the year 1990-91. Of the remaining two universities viz. Jadavpur and Visva Bharati, the proposal of the Jadavpur University for conducting such programmes from the year 1991-92 has been accepted by the Commission.

Phase II : Refresher courses for in-service teachers

This programme was initiated in 1988-89 and since then the Commission has identified 154 university departments/institutions on regional/national basis for conducting subject-oriented refresher courses for in-service teachers. At present, these courses are being conducted only for lecturers. Each centre is expected to organise four-five such courses in the allotted discipline in Social Sciences, Sciences and Humanities and two-three courses in languages during a year.

** Notified catchment area of an ASC generally includes specified universities and colleges in a State.

The Commission, in collaboration with the National Institute of Educational Planning and Administration (NIEPA), organised a meeting of the Directors of Academic Staff Colleges in August 1990 to discuss the following issues:

i) Progress of orientation and refresher programmes conducted till July, 1990.

ii) Feedback of the programmes received by the Academic Staff Colleges from the Principals in their catchment areas as well as teachers oriented by the ASCs;

iii) Thrusts of these programmes for the year 1990-91;

iv) Steps for effective and smooth functioning of Academic Staff Colleges.

The number of programmes conducted during the year under review is given in the following table:

Programmes Conducted by ASCs during 1990-91

Type of Programme	No. of programmes	No. of teacher participants
1. Orientation	**156**	**4,601**
2. Refresher	**308**	**8,369**
Total:	**464**	**12,970**

The Commission provides 100 per cent assistance to the ASCs for organising orientation/refresher courses. Grants to the tune of Rs.450.74 lakhs were released to the universities for this progrmme during 1990-91.

A review of the programme was carried out by a Committee appointed by the Commission. The Committee submitted its report in February,1991. Pending detailed consideration of the report by the Commission, it was decided to further extend assistance to universities on ad hoc basis upto 31st March, 1992 on the existing pattern.

10.06 National Fellowships

The scheme of National Fellowships provides an opportunity to eminent teachers to take a year or two off from their normal duties to devote themselves exclusively to research. Under the scheme, 30 slots are available at any point of time. Teachers who are awarded this fellowship receive their normal salary, allowances and fellowship allowance of Rs.500/- per month in addition to a non-lapseable grant of Rs.5,000/- per year for secretarial assistance, travel and contingent expenditure. During 1990-91, ten scholars were working under the scheme. The Commission has decided to give wide publicity to the scheme to ensure that all the available slots are utilised year after year.

10.07 Visiting Associateships

The scheme aims at assisting outstanding university/ college teachers, generally below 40 years of age and engaged in research, to visit and work for short periods (not exceeding three months at a time) at other university centres/research institutions/national laboratories which have special facilities relevant to their fields of work. The Commission meets the actual cost of travel of the Visiting Associates. In addition, each Associate receives an allowance of Rs.1200/- per month to cover his living expenses. In case free accommodation is not provided by the host institution, an allowance of Rs.2000/- per month is paid to the awardee. An additional amount of Rs.500/- is also provided to such of the awardees who are required to undertake field work as part of their assignment. Three types of Associateships are awarded viz. for one-year, three-years, and five-years. The number of one year awards available every year is 100 while that of three and five- year awards is 150 each.

No award was made during 1990-91 as the scheme was under review. During the year, the Commission decided that wide publicity should be given to the scheme to ensure that all the available slots are utilised year after year.

10.08 National Lectureship

During the year, the Commission decided to discontinue the scheme of National Lectureship from the Eighth Plan. Initiated in 1970, the scheme envisaged utilisation of the services of outstanding teachers and research workers in the university system for promoting academic standards. Since its inception, National Lectureships were awarded to over 750 teachers from various universities and colleges. The discontinuance of the scheme has been necessitated as it was found overlapping with other faculty improvement schemes of similar nature concurrently under operation by the Commission in the university system including National Fellowships, Visiting Professors, Visiting Fellows, Visiting Associateships and Careers Awards.

10.09 Guest/Part-Time Teachers

Guest/Part-time teachers are appointed by universities and colleges in exceptional circumstances in such specialised fields/subjects where professional expertise is required to strengthen and supplement teaching as also in cases where the work-load does not justify the appointment of a full-time regular teacher throughout the academic year. An honorarium of Rs.1000/- is paid to such teachers if the workload is 7-10 hours per week.

10.10 Emeritus Fellowships

Under the scheme, emeritus fellowship is provided to such of the highly qualified and experienced superannuated Professors in universities who have been actively engaged in research during their career. The fellowship is for a period of two years or the age of 65 years, whichever is earlier. The objective of the scheme is to enable superannuated Professors to pursue active research in their fields of specialisation and to utilise their services for monitoring educational programmes of the Commission. The awardee gets, besides his

usual superannuation benefits, a fellowship amount of Rs.4,000/- p.m. and a non-lapseable contingent grant of Rs.10,000/- p.a. for secretarial assistance, travel, stationery, postage, telephone rent, consumables etc. House rent allowance at the Central government rates is also admissible to such of the awardees who live in rented private accommodation. The total number of fellowships available at any given time is 60. During 1990-91, 29 awards were given under the scheme.

10.11 Visiting Professors/Visiting Fellows

The Commission provides assistance to universities for appointment of Visiting Professors/ Visiting Fellows on payment of honorarirum/DA basis. While a Visiting Professor is provided an honorarium upto Rs.5,000/- p.m., a Visiting Fellow is paid daily allowance @ Rs.200/-. The Commission has decided to continue the scheme during the Eighth Plan period without any change in the existing guidelines. The quantum of the UGC assistance to each university for this purpose will co-relate with the Eighth Plan allocation of the university for its Eighth Plan general development, as detailed below:

S.No.	Eighth Plan allocation for general development	The quantum of UGC Support
A.	**Upto Rs.75 lakhs**	**Rs.3 lakhs**
B.	**Between Rs.75 lakhs and Rs.100 lakhs.**	**Rs.4 lakhs**
C.	**Above Rs.100 lakhs**	**Rs.5 lakhs**

During the year 1990-91, grants to the tune of Rs.3.78 lakhs were released for the purpose.

The Commission had been receiving a number of requests from teachers of Kashmir university for providing them with teaching/research assignments outside the Kashmir univesity as the conditions are not conducive to work in the university due to disturbed conditions. The Commission at its meeting held in November, 1990 considered the matter and agreed to create a few positions of "Visiting Faculty" in the universities so as to provide teaching/research assignments to the teachers from Kashmir university and its affiliated colleges in the categories of 'A' 'B' & 'C' (for the existing Lecturers, Readers and Professors) carrying a consolidated honorarium of Rs.2,500/- per month, Rs.3,000/- p.m. and Rs.4,500/- p.m. respectively. The Commission also decided that these teachers would be entitled to draw their salaries from their parent university (Kashmir university) and its affiliated colleges in addition to the honorarium at the rates as indicated above. The tenure of the award of the "Visiting Faculty" is of two semsters or one academic year.

10.12 Participation of Retired Teachers in Research Projects

The Commission has been providing honorarium to superannuated teachers participating in approved research projects as principal investigators. Under this scheme a retired teacher is expected to teach four to six hours a week in addition to his research/project work for

which he should attend the university/college during normal working hours. The honorarium payable to retired teachers for the purpose is Rs.2000/- p.m.

10.13 Research Scientists

The work of the Research Scientists of all the categories A,B & C, who are already working on projects in universities and institutions was reviewed during the period under report. According to the provision contained in the rules of Research Scientist Scheme, the Commission, on the recommendations of the Review Committee in each subject and discipline decided to drop one candidate and allowed others to continue in the same category for part or full period of contract. During the period under report, the Commission also selected 53 candidates (including five SC/ST candidates) for the award of Research Scientist of 'A' category (equivalent to Lecturer) on the recommendations of the Selection Committee. The Commission has also decided that the scheme of Research Scientist may be rigourously reviewed by the Review Committee already constituted by the Commission.

10.14 Travel Grants for Attending Conferences etc.

The Commission has been providing partial assistance to college teachers for participation in international academic conferences abroad. The Commission's assistance is limited to 50% of the total expenditure on admissible items like registration fee, international air passage, airport tax, daily allowance at the prevalent rate. During the period under report the Commission provided Rs.29.15 lakhs to colleges under the scheme.

Similar assistance is provided to university teachers under the scheme of Unassigned Grant.

10.15 Faculty Housing Complex/Guest House

The Commission has also been providing grants on a limited basis for the construction of faculty housing complex, guest houses for the faculty and teachers' hostels. Grants amounting to Rs.76.00 lakhs were released for the purpose during 1990-91.

10.16 Teacher Fellowships

The scheme enables teachers in affiliated colleges to acquire M.Phil/Ph.D. and thus improve their professional competence and keep themselves abreast with latest developments in their fields of study and research.

The scheme has been revised in the Eighth Plan. As per the revised scheme in operation since 1990-91, the Commission wll provide only short term teacher fellowships of one year duration for enabling college teachers to pursue M.Phil. courses. The earlier programme of awarding long-term teacher fellowships for doing Ph.D. has been discontinued. However, a teacher who has done sufficient work relating to his Ph.D. degree and needs only one year to complete the work could be considered for the award of a short-term teacher fellowship of one year duration.

This scheme will apply only to those colleges which will be eligible to receive development assistance during the Eighth Plan period. The number of fellowships to be awarded will be

decided on the basis of permanent teachers (or teachers appointed on regular basis in case of Government colleges) including the Principal but excluding the Physical Training Instructors/Director of Physical Education and the Librarian. Each college will have one short term teacher fellowship of one year duration for every five permanent teachers (or teachers appointed on regular basis in case of Government colleges) subject to a maximum of eight such fellowships. Only permanent teachers (or teachers appointed on regular basis in case of Government colleges) upto the age of 45 years (relaxable by 5 years in case of women teachers) with atleast 3 years of service and atleast 50% of marks at the Master's degree level will be considered for award of teacher fellowships. Selection of teachers for such awards will be made with the help of a Selection Committee to be constituted for the purpose. The awards will have to be approved by the Vice-Chancellor of the university to which the college is affiliated. The Commission will only reimburse the expenditure.

The Commission will pay Living Expenses Allowances (LEA) @ Rs.750/- per month, contingency grant limited to Rs.5,000/- per annum for humanities, social sciences and commerce subjects and Rs.7,500/- per annum for science subjects (including Mathematics, Statistics, Geography and Psychology) and travelling allowance for joining the research centre and joining back the parent institution after completion of the tenure of award as per the college rates (by first class train/bus) in respect of a teacher selected for the award. However, the LEA and TA will only be paid if the distance between the centre of research and the parent institution of the teacher fellow is not less than 40 kms. and also if the centre of research and the parent institution do not belong to the same city.

The scheme does not apply to teachers working in professional colleges offering courses in medicine, agriculture and engineering.

10.17 Traditional Scholars

Under this scheme, introduced last year, the Commission selects traditional scholars of Sanskrit, Pali, Prakrit, Arabic and Persian for induction into the university system. The scheme is expected to knit together the traditional Indian scholarship and modern learning within the universities. The selected traditional scholars are paid emoluments/honoraria equivalent to those offered to the Visiting Professors. They will be available at the designated university campuses to the faculty members/ research scholars for consultation, guidance and for giving formal lectures and informal talks. The appointments will be made for a period of one year. However, some scholars, because of their life-style; may be unable to leave their habits. In such cases, the university/college teachers and research scholars would go to them for guidance and consultation for which they will be paid TA/DA as per rules. The Commission has set aside additional grants for universities which make such appointments.

10.18 UGC Professorship

During 1989-90, the UGC formulated a scheme to institute 100 to 150 positions of UGC professorships covering all the disciplines for the university teachers. The funding of the scheme would be on 100% basis. The Scheme was forwarded to the Government of India, Ministry of Human Resource Development and their concurrence was awaited.

Section-11

PROGRAMMES FOR STUDENTS

11.01 The Commission has been implementing various academic & welfare programmes for the well-being of the student community so as to generate an enviornment conducive to study, learning and research. Efforts of the Commission in this regard have contributed to the maintenance and improvement of standards of higher education in the country. All development programmes of the Commission including appointment of staff, construction of academic buildings, libraries and laboratories, purchase of equipment, books and journals have a direct or indirect bearing on the well-being of the students and promotion of congenial environment and conditions for pursuing academic programmes. In addition, the Commission has initiated a number of programmes for needy and socially weaker students on the one hand and meritorious students on the other, like the provision of scholarships and fellowships, hostel facilities etc. An account of the various programmes in operation is given in the paragraphs that follow.

11.02 **Junior Research Fellowships 'At any one given time basis'**

The Commission continued to provide assistance to universities for the implementation of the scheme relating to allocation of junior research fellowships 'at any one given time basis' with a view to provide opportunities to scholars to undertake advanced studies and research work leading to M.Phil/Ph.D. programme in Science & Humanities including Social Sciences. Since 1984, the junior research fellowship award is made only to those candidates who qualified in the national level test conducted by the UGC/CSIR or test declared equivalent there to for the purpose.

Number of fellowships for the NET qualified candidates had been allocated to universities under 'at any one given time basis' scheme. Universities were requested to make award to the qualified candidates keeping in view the number of junior research fellowships available. The Commission continued to provide supernumerary/ personal fellowships over and above the allocated quota of the universities to accommodate the registered and JRF qualified candidates.

11.03 **Junior Research Fellowships for Scheduled Caste/Tribe Students**

Earlier, there was reservation for Scheduled Caste/Tribe students to the extent of 10 per cent of the Junior Research Fellowships allocated to various universities under the UGC scheme "JRF at any one given time basis". After the introduction of the UGC-NET-JRF examination, provision of reservation of 10 per cent positions of JRF for SC/ST candidates by the university was abolished and in its place now, relaxation upto 10% in the cut off marks in the UGC-NET-JRF examination is given to SC/ST candidates. During May, 1989 the Commission decided that since the number of JRF qualified SC/ ST candidates is generally

very small, all SC/ST candidates qualifying the JRF examination may be awarded the Junior Research Fellowship. In case there is no vacancy under the scheme of "JRF at any one given time basis"' the Commission will provide personal supernumerary positions of JRF to the universities in respect of such SC/ST candidates. All the SC/ST JRF qualified candidates were informed of this decision.

Apart from the above, the Commission also awards directly 50 Junior Research Fellowships every year in Science and Humanities including Social Sciences to SC/ST candidates through open selection. As per the revised procedure for open selection, candidates who could not qualify the UGC NET/Joint UGC-CSIR JRF examination even at the relaxed standards are interviewed and selected for the award. Accordingly the awards for the year 1989-90 and 1990-91 have since been finalised by the Commission.

11.04 Border Hill Areas Scholarships

The Commission also awards 25 post-graduate scholarships by open selection to SC/ST/Backward Community candidates belonging to border hill areas in order to promote the channel of academic communication between students of these regions and rest of the country.

11.05 Research Fellowships in Engineering and Technology

The Commission awards 60 research fellowships every year in Engineering and Technology to enable students in this discipline to undertake advanced study and research in their fields of specialisation leading to Ph.D., for which minimum qualification is Master's degree in Engineering/Technology. The candidate should have qualified GATE/Joint UGC-CSIR JRF examination within the last three academic years.

11.06 Lump-Sum Grant to Universities for Meeting Contingent needs of Research Scholars

The Commission provided lump-sum grant to universities for meeting contingent needs of the research scholars who are not in receipt of any fellowship/scholarship. Assistance for this purpose was provided at two levels viz. Rs.25,000/- for the universities having an average of 100 full-time research scholars during the last three years and Rs.50,000/- for the universities having an average of more than 100 full time research scholars.

11.07 Junior Research Fellowship/Research Associateship to Foreign Nationals of Developing Countries

The Commission awards annually 20 junior research fellowships for doing research leading to M.Phil./ Ph.D. degree and seven research associateships for doing post- doctoral research to scholars from developing countries in science, engineering and humanities including social sciences. During the year under report, the Commission, on the recommendations of the selection committee, selected 33 junior research fellows and two research associates from different developing countries. Award letters are issued on receipt of the clearance from the Ministry of External Affairs and the Ministry of Home Affairs from political angle and security angle resectively.

11.08 Research Associateships

The Commission annually awards 150 research associateships including five each for Gandhian Studies, Nehru Studies and National Integration with a view to provide an opportunity to scholars who have shown talent and competence to take up post-doctoral research work in science, humanities including social sciences and engineering /technology. During the period under report, the Commission finalised the award against the quota of 1987-88 and 1988-89 and also invited appplications against quota for the year 1989-90.

11.09 Part-time Research Associateships for Women

The Commission annually awards 40 part-time Researh Associateships for women with a view to provide an opportunity to research scholars who have shown talent and competence to take up post-doctoral research work independently or on project assignment in Science, Humanities including Social Sciences and Engineering/ Technology. During the period under report the Commission finalised the award against the quota of 1988-89 and also invited applications for the year 1989-90.

11.10 Research Associateships for Scheduled Caste/Tribe Students

The Commission sets aside 40 Research Associateships every year for Scheduled Caste/Tribe candidates. During the period under report, the Commission finalised the awards against the annual quota of 40 positions each for the year 1987-88 and 1988-89 and also invited applications for the year 1989-90.

11.11 Research Associateships for Disabled Students

Thirty Research Associateships are reserved every year for the disabled students. During the year, the Commission finalised the awards against the annual quota of 30 positions each for the years 1987-88 and 1988-89 for physically handicapped scholars including the blind, the deaf and the mute. The Commission also invited applications for these awards for the year 1989-90.

11.12 Construction of Hostels

In the interest of social justice, the Commission has laid down that all universities, assisted by it to construct students' hostels would be required to reserve 20 per cent of the seats in such hostels for students belonging to Scheduled Caste and Scheduled Tribe communities. As per revised guidelines laid down for the 8th plan, the Commission would meet the entire expenditure for consturction/improvement of women's hostels and 75 per cent of the expenditure on men's hostels during the 8th Plan as against 75 and 50 per cent respectively prevailing during the 7th Plan. The Commission encourages the construction of dormitories and/or double or triple seated rooms rather than single seated rooms in the hostels in order to keep the per student cost low.

During 1990-91, a grant of Rs.100 lakhs was paid to universities and colleges towards the construction/ improvement of hostels.

11.13 Bharat Bhavan Hostel Complexes in Selected Universities

The Commission, while accepting the recommendtions of the committee on setting up of Bharat Bhawan Hostel Complexes in universities on selective basis in phases, had requested the Government of India, Ministry of Human Resource Development during 1989-90 to provide separate funds to the tune of Rs.75 crores to the Commission for this purpose so that the scheme could be implemented during the 8th Plan period. However, the Commission, while formulating its proposal for the 8th Plan period, has made a provision of Rs.55 crores for the construction of student hostels including Bharat Bhawan Hostel Complexes in universities.

11.14 Youth and Sports - Implementation of New Education Policy (1986)

The Commission has been implementing various provisions of the New Education Policy (1986) in the field of Youth and Sports. In this connection, the following steps were taken during 1990-91:

(a) The Commission decided to organise in connection with the Lakshmibai National College of Physical Education (LNCPE), Gwalior refresher courses of four weeks duration for the Directors of Physical Education. The LNCPE organised the first course in May/June, 1990.

(b) The report of the Committee appointed to prepare a Model Curriculum of Physical Education, which had been referred to the Panel on Physical Education, was finalised. The report of the Committee along with the recommendations of the Panel on Physical Education have been circulated to the universities for adoption.

SECTION-12

CULTURAL EXCHANGE PROGRAMMES AND INTERNATIONAL COLLABORATION

12.01 Cultural Exchange Programmes

Programmes of Cultural Exchange are intended to promote cultural, educational and scientific cooperation between India and other countries and are covered under specific agreements between the Government of India and Governments of other countries. Programmes connected with higher education in the university sector are assigned by the Government of India to the UGC for implementation. These programmes relate generally to exchange of visits of teachers for study-cum-lecture, exchange of views, developing contacts, development of bilateral academic links between institutions in the two countries, organisation of joint seminars, assignment of foreign language teachers and award of scholarships/fellowships. Visits under these programmes normally range from four to twelve weeks. In specific cases, these visits could be for a period of upto six months. In the case of assignment of foreign language teachers and award of fellowships/scholarships, these visits are normally for one academic year. These programmes prove useful to our teachers in keeping themselves abreast of advances made in their fields of specialisation and in exploring possibilities of developing collaborative programmes. During 1990-91, such programmes were being implemented by the Commission with 48 countries. During the year, the Commission hosted the visits of 113 foreign scholars from various countries and arranged their programmes at various institutions in India. The corresponding number of Indian scholars who were deputed abroad under these programmes during the year was 114.

12.02 Bilateral Institutional Linkages

In the recent past, the Commission has been emphasising more on the development of bilateral institutional linkages in specific areas between identified departments of universities and institutions of higher education in the two countries. Accordingly, areas of bilateral collaboration have been identified with countries like the USSR, Germany, Bulgaria, Czechoslovakia, Hungary, Poland, France, Yugoslavia, Italy, Finland, Iran, Baharin etc. Efforts are also being made for such collaboration with USA and Canada. This programme is reviewed from time to time and additional areas are identified for collaboration.

A resume of the various activities under the Cultural Exchange Programmes undertaken during 1990-91 is given below:

12.03 **Delegations**

i) A three-member delegation from Seychelles visited India on 26th February, 1991 for a period of 14 days under Indo-Seychelles Cultural Exchange Programme to have first hand knowledge of the education system in India.

ii) A six-member delegation from Iran visited India during March-April, 1991. This visit was, however, adjusted outside the Cultural Exchange Programme.

12.04 **Foreign Language Teachers**

The Commission continued to provide foreign language teachers in Russian, German, Polish, Serbo-Croation, Rumanian, Bulgarian, Mongolian, korean, Vietnamese, Hungarian, Portuguese,Chinese and French languages to the universities having a proper infrastructure for teaching the foreign languages concerned as per the provision of the Cultural Exchange Programme. Foreign language teachers are meant to support the indigenous staff and not replace them. It has been the endeavour of the Commission that the foreign language department in a university develops a proper infrastructure in the teaching of the foreign language concerned with the help of Indian faculty members and reaches a level when they can intereact with foreign language teachers from abroad. During the year 1990-91, 45 teachers in Russian, 11 in German, 10 in French, 2 in Spanish and 1 each in Polish, Serbo-croation, Bulgarian, Mongolian, Korean, Vietnamese, Hungarian, Chinese and Portuguese were assigned to universities in india.

12.05 **Fellowships and Scholarships**

The position regarding fellowships/scholarships offered under the Cultural Exchange Programme during 1990-91 was as follows:

i) The Commission nominated 15 scholars against the 12 fellowships offered by the German Academic Exchange Service for advanced research in Natural Sciences, Mathematics, Geology, German language and Literature and some areas in Humanities and Social Sciences. Two of these fellowships are reserved for German language and Literature.

ii) Six students were nominated against the six short-term fellowships for senior students of M.A. course as well as for students enrolled in M.Phil/M.Litt. course at the German departments of Indian universities by the German Academic Exchange Service.

iii) The Commission nominated three Indian teachers against the three invitations of three-months duration offered by the German Academic Exchange Service for teachers of German language teaching at Indian universities, IITs and institutions deemed to be universities.

iv) The Commission also nominated five scholars against the offer of the German Academic Exchange Service of six short-term fellowships (24 man-months) for the year 1991 of three to six months duration to Indian students registered for Ph.D. in India in German Culture, History, Economics, Philosophy, Education and Natural Sciences.

v) The Commission nominated 14 teachers against the 14 fellowships and 4 students against 4 scholarships offered by the French Government for French Language, Literature and Civilisation for 1990- 91.

12.06 **Travel Grants to Teachers who have offers of Fellowships/ Stipends for their Maintenancce in a Foreign Country**

The Commission continued to provide travel grant to teachers for their visit to foreign countries for collection of material for their research work or to avail offer of a fellowship or assistance from an agency from that country where the scholar has been offered financial assistance for maintenance. Twelve teachers were provided assistance under this scheme during the year.

12.07 **Collection of Source Material for Research Work in UK and other Countries**

The Commission continued to provide travel and maintenance expenses to senior Indian scholars in humanities and social sciences for their visit to UK for a period of 6 to 8 weeks to enable them to collect material for their research work, which is ordinarily not available in India. The period of 52 weeks available under this programme was utilised and eight scholars were assisted during the year.

12.08 **INDO-US Fellowship Programme**

Against 15 fellowships of ten months each to American scholars for their post-doctoral research work in India, the Commission received nominations for 12 long-term fellowships of ten months duration and six short term fellowships of two to three months duration. The Government of India allocated 12 fellowships to UGC for the visit of Indian teachers from universities/colleges and Institutes of Technology for post-doctoral work in USA. Of these, the Commission converted four fellowships into 12 short-term visitorships of three months each. Accordingly, it made nominations against the eight long term fellowships of ten months each and 12 short-term visitorships of three months each.

12.09 **CSIR-CNRS (France) Exchange of Scientists Programme**

Under this programme, the CSIR allocates 200 man-days for the visit of Indian scientists from the university system to France and similarly the UGC allocates 200 man-days to the CNRS for the visit of French scientists to India in connection with their research work. During 1990-91, six Indian scholars visited France for four weeks each.

12.10 **Development of Canadian Studies**

The Commission has initiated Area Studies Programme on Canada. The Commission, on the advice of a Consultative Group on the development of Canadian Studies in India,

identified 13 departments for financial support at various levels. These centres will carry out study on various aspects of Canada. These studies will be mainly related to the historical, social, economic and political aspects.

12.11 Academic Linke Inter-Change Scheme (ALIS)

This programme is implemented in collaboration with the British Council for the development of linkages in specified areas between institutions of higher education in India and the U.K. The main objectives of the scheme are joint research work, joint publication, curriculum development and visit of faculty members.

During 1990-91, 15 Indian scholars visited the U.K. while 10 British scholars visited universities in India. Under the scheme, the sponsoring side bears international travel cost while the receiving side bears lodging, board, pocket allowances and internal travel.

12.12 SAARC Chairs/Fellowships/Scholarships

Pursuant to the decision taken at the 15th Session of SAARC Council of Ministers, the Government of India decided to operate a scheme of SAARC Chairs/Fellowships/Scholarships. The University Grants Commission is the implementing agency for this scheme. The country-wise slots available under this scheme are as follows:

	Bangladesh	Bhutan	India	Nepal	Pakistan	Sri Lanka	Maldives
Chairs	1	-	1	-	1	1	-
Fellowships	6	1	6	1	6	6	-
Scholarships	12	-	12	2	12	12	-

During 1990-91, the Commission nominated one scholar for chairs, two for fellowships and five for scholarships to Pakistan. Similarly, from other SAARC countries, Bhutan sent one nomination for fellowship, Nepal sent one nomination for fellowship and two for scholarships while Pakistan sent four nominations for scholarships. Under the scheme, the sending country meets international air-fare of the scholar while the receiving side makes all arrangements regarding admissions and payment of allowances as per agreed terms.

12.13 International Centre for Theoretical Physics (ICTP)

The organisers of ICTP invite teachers from Indian universities/colleges for participation in the summer schools held at Trieste, (Italy) or any other country. The Commission provides 50% international air fare to the teachers while the remaining amount is provided by the ICTP alongwith maintenance for the entire period of the summer school. During 1990-91, the Commission assisted four university/college teachers under the scheme.

12.14 Commonwealth Academic Staff Fellowships & Scholarships

The Commonwealth Academic Staff Fellowships and Scholarships are intended to help teachers of universities/ colleges in developing commonwealth countries to enhance their experience in the universities or similar institutions in U.K. Under this programme, the Commission coordinates with the Association of Commonwealth Universities in U.K. and makes nominations for the award of Commonwealth fellowships and scholarships to enable promising faculty members in universities and colleges in India to do research work at universities or other institutions in the U.K. No specific areas of study have been prescribed but medicine and surgery have been excluded as these disciplines are already provided for under Commonwealth Medical Awards. During 1990-91 the Commission recommended 25 teachers for fellowships and 25 for scholarships. Out of this, the Association of Commonwealth universities finally selected 13 for fellowships and 15 for scholarships.

12.15 Visits Abroad:

In pursuance of the decision taken on recommendation 3.8 contained in the 73rd report of the Public Accounts Committee (Sixth Lok Sabha) on University Grants Commission, the information in respect of the visits abroad of the Chairman, Vice-Chairman and Officers of the Commission during the year 1990-91 is given in *Appendix-XXX.*

SECTION - 13

ADULT, CONTINUING AND EXTENSION EDUCATION AND DISTANCE LEARNING

13.01 Adult, Continuing and Extension Education

The University Grants Commission has since long recognised extension as the third dimension of the university system equal in importance with the other two dimensions viz., teaching and research. The Commission's thinking in this regard is spelt out in the following words:

> "If the University system has to discharge adequately its responsibilities to the entire education system and to the society as a whole it must assume extension as the third important responsibility and give it the same status as research and teaching. This is a new and extremely significant area which should be developed on the basis of high priority".

In this context, the new guidelines on Adult and Continuing Education and Extension Programmes in universities and colleges (1988) envisaged critical development goals which should broadly include the following:-

a) Eradication of illiteracy including the Mass Programme for Functional Literacy and post-literacy programmes.

b) Continuing education programmes viz. development of basic learning skills and professional know-how;

c) Population education for improving quality of life including health and nutrition, prevention of drug- abuse, environment-education etc.

d) Legal literacy for all sections of society, promoting knowledge of various development programmes including women's developoment, tribal development, consumers education and education about the plans through planning forums;

e) Science for people including transfer of science and technology;

f) Other welfare and integrated community developoment activities.

The Commission's assistance is available for (a) eradication of illiteracy both through centre-based approach as well as through the Mass Programme for Functional Literacy (in regard to non-NSS and non-NCC students), (b) Population Education activities through students' clubs and Adult Education Centres (c) Continuing Education and (d) Jan Shikshan Nilayams (JSNs).

The position of the programmes approved upto the end of March, 1991 as per new guidelines is given below:

a) No. of Universities involved - 93

b) No. of colleges involved - 1284

c) No. of Adult Education Centres through Universities & Colleges - 17940

d) Mass Programme for Functional Literacy - 93 Universities + 1286 Colleges

e) Populalation Education through

i) Population Education Clubs in Universities & Colleges - 1286

ii) Population Education activities at the Adult Education Centres - 16780

f) Continuing Education courses - 794

g) Jan Shikshan Nilayams - 1096

The Commission continued to provide assistance to universities to run the above mentioned programmes both in the universities as well as in the colleges affiliated to them.

While sanctioning the above programmes under the new guidelines framed in 1988, it was decided that the programmes would be reviewed after three years i.e. in 1990-91. A Sub-Committee constituted for the purpose under the Chairmanship of Professor Ramlal Parikh met in December, 1990 and decided that the on-going programmes may be reviewed by the Sub-Committee by inviting the universities, participating in the programme, to discuss their performance, problems and new proposals. Accordingly, this exercise was started in March, 1991 and a detailed report on the subject was awaited.

The Commission's assistance for the salary of the staff in the departments/centres for Adult & Continuing Education in universities would be available up to the period ending March, 1995. During the year, the Commission continued to approach the Vice-Chancellors and the Chancellors of the Universities to obtain assurance from the State Governments that they will take over the liability of the staff after the Commission's assistance ceases on 31.3.1995.

Keeping in view the work being done by Universities/Institutes on Adult and Continuing Education and their specific requirements in the context of local conditions, the Commission continued to provide assistance as per provision contained in the guidelines for the purchase

of vehicle and the salary of the driver on a 50:50 sharing basis. Similarly, assistance was also provided for the purchase of audio-visual aids to the universities within the ceiling prescribed in the guidelines.

13.02 **Mass Programme for Functional Literacy:**

The Commission has been actively promoting the Mass Programme for Functional Literacy (MPFL) introduced by the Government of India in 1986. While the larger programme of Adult Education is being implemented by the Ministry of Human Resource Development, Government of India, through its Literacy Mission, the UGC on its part has laid much emphasis to involve teachers and students of all universities and colleges in the programme. During the year, the Universities were accordingly advised to continue and strengthen their involvement in the programme through NSS, non-NSS, non-NCC etc. for which the Commission's assistance was made available.

During the year under report, the former Chairman, UGC mooted an idea for Mass Action for National Regeneration (MANR). A series of discussions were arranged with a view to involve students and teachers, voluntary agencies, retired personnel including defence and office workers who support the educational system. Under this programme it was felt that apart from wiping out illiteracy, there was need to give importance to other problems like drinking water, sanitation, health etc.

During the year, the Bhartiya Gyan Vigyan Samiti (New Delhi), which is a voluntary agency for the removal of illiteracy among the masses, approached the Ministry of Human Resource Development that the services of university teachers may be made available to work on whole-time basis for the nation wide literacy movement. The Commission agreed to the deputation of 100 teachers from universities/colleges for a period of two years on whole-time basis by supporting the full cost. Under this programme 18 teachers have been approved to work on deputation with the Bhartiya Gyan Vigyan Samiti.

13.03 **Planning Forums**

The Scheme of Planning Forum has been revamped and taken out from the Departments/Centres for Adult, Continuing Education at universities/colleges which have been suggested to continue the scheme under the purview of the departments of Economics. The quantum of assistance has also been raised upto Rs.10,000/- per unit.

13.04 **Population Education**

The Commission continued to provide assistance to universities and colleges for setting up population education clubs for the promotion of population education programmes in the university system. It has also impressed upon the universities to utilise the Adult Education Centres and Jan Shikshan Nilayams for the spread of population education at the grassroot level. In addition, Population Education Resource Centres (PERCs) and working groups have been set up under the UNFPA-UGC project to provide support services to population education programme run by universities/colleges in specified areas in terms of development of curricula, training of PERC staff and teachers and extension activities in the community.

Some universities have included population education as a foundation course at the undergraduate level under the scheme of Restructuring of Courses. During the year, the Commission decided to continue financial assistance for this programme, including the PERCs, upto the end of March, 1995. An important aspect of the functioning of PERCs has been the establishment of linkages within their service area and also with other departments such as Departments of Women and Child Development, Health and Family Welfare, Science and Technology and non-governmental organisations. Other important activities undertaken by the working groups are Preparation of Directory of Learning Materials (print and audio-visual), Training Manual and other material useful for this programme.

The PERCs have organised street plays, puppet shows, workshops, seminars, lectures and provided training to the staff from the PERCs as well as from service areas. Various training programmes on Population Education have been organised by the PERCs for village/community leaders, rural women, college principals/teachers, writers etc.

13.05 Coaching Classes for Competitive Examination for Weaker Sections Amongst Educationally Backward Minority Communities

The Commission continued to provide assistance to universities and colleges for conducting coaching classes to prepare candidates belonging to the educationally backward amongst minority communities for various competitive examinations as well as for admission to professional and technical courses. During the year, assistance was provided to eleven universities and twelve colleges from which progress reports and grant utilisation certificates were received regarding programmes organised during the preceeding years. In addition, several colleges were identified during the year for assistance to organise coaching classes. Other institutions were impressed upon to expedite implementation of the programme.

The centres located in universities provide coaching for all-India services as well as state services, while the centres located in colleges are responsible for organising coaching classes for lower categories of examinations.

At present 20 centres in the universities and 33 cells in the colleges have been established by the UGC.

13.06 Distance Education/Correspondence Courses

Distance Education/Correspondence Education, essentially based on the supply of instructional material for home study, is supported and supplemented by personal contact programmes, radio programmes, audio-visual aids, etc. The objectives of the scheme are (a) to meet the increasing demand for education by utilising alternative systems and (b) to bring about equalisation of opportunities by providing facilities in backward regions to weaker sections of the community who have to take up jobs owing to their pecuniary circumstances and to women who find it difficult to go to a college as they belong to traditional families and communities.

Correspondence courses were being conducted by 39 universities/institutions as on 31.3.1991. A list indicating the courses run by them is given at *Appendix- XXXI*. During the

year, the Commission provided assistance for this purpose to seven universities by way of staff, personal contact programmes, study centres, preparation of lessons, library facilities etc.

A sub-committee appointed by the UGC Standing Committee on Distance Education for revision of guidelines submitted its report during the year. The report was being processed. The report covers the following aspects of Distance Education:

i) Organisational set-up of institutions of correspondence courses within the university system.

ii) Pattern of assistance.

iii) Developing consortium approach by universities having correspondence courses so as to be able to share resources infrastructure to make the programme more effective.

iv) Continuous review and updating of learning material.

SECTION - 14

FACILITIES FOR SCHEDULED CASTES AND SCHEDULED TRIBES

14.01 It has been the endeavour of the Commission year after year to extend the coverage of the facilities provided to the Scheduled caste and Scheduled tribe candidates in universities and colleges. The Commission has provided for reservation of seats in various courses offered by universities and colleges, reservation in recruitment for non-teaching posts and posts of lecturers, and reservation of seats in hostels. It has also set aside various scholarships and fellowships awarded by it and initiated a host of schemes for the advancement of the academic community belonging to these groups.

During the year, the Commission considered the observations of the Parliamentary Committee on Scheduled Castes and Scheduled Tribes regarding:

(a) Carrying forward the post of lecturers

(b) Review of JRF for SC/ST to show an upward trend and

(c) Publication of uniform recruitment/promotion rules for central universities.

As regards (a) above, the Commission agreed to send the observations of the Government of India for implementation to all Central Universities and deemed to be Universities (receiving 100% maintenance grant from the Commission). Regarding (b) the Commission desired that this matter may be considered in the meeting of the Moderation Committee of NET while in respect of (c) above, the Commission desired that the publication may be brought out early.

The following paragraphs give an account of the various measures and schemes initiated by the Commission for promoting and safeguarding the interests of Scheduled Castes & Scheduled Tribes.

14.02 **Reservations in Admission to Various Courses in Universities and Colleges**

The Commission has requested the universities to reserve 15 per cent of seats for admission in various courses for Scheduled Caste candidates and 7.5 per cent for those belonging to Scheduled Tribes with a provision for interchangeability, where necessary. While making these reservations, universities may also make a provision to give concession of 5 per cent marks in the minimum percentage of marks required for admission to any course of study. In case by allowing the above concession, some seats in the reserved quota remain unfilled, a further relaxation in the marks may need to be given to them in order of merit inter-se amongst them, so that all the reserved seats for SC and ST candidates are filled by the candidates belonging to these two categories only. Detailed guidelines for full implementation of reservation in admission to all courses and faculties/departments were circulated to universities/colleges last year.

14.03 Reservation in Appointments to the Posts of Lecturers and Non-Teaching posts

Universities/Colleges have also been requested to make reservation in the appointments to the posts of lecturers and non-teaching posts @ 15% for Scheduled Castes and 7.5% for Scheduled Tribes. The instructions of the Government of India banning dereservation of posts, reserved for SCs and STs, have been brought to the notice of universities and they have been advised to launch special drive, covering both direct recruitment and promotion, so that the actual representation of SCs and STs is up to the prescribed quota.

14.04 Reservation of Seats in Students' Hostels

The Commission has also advised the universities/colleges to set aside not less than 15 per cent and 7.5 per cent seats for SC and ST students respectively out of the total number of seats available in students' hostels.

14.05 Reservation of Seats/Units in Staff Quarters and Teachers' Hostels

The Commission has requested the universities/institutions to provide reservation for members of SC/ST in the allotment of seats/units in teachers' hostels andstaff quarters from the year 1990-91. The reservation is to the extent of 15 per cent for Scheduled Castes and 7.5 per cent for Scheduled Tribes in central universities and deemed universities (receiving 100 per cent maintenance grant from UGC). In the case of State universities/deemed universities (receiving maintenance grant from State governments) the percentage would be as fixed by their respective State governments for similar facilities.

14.06 Setting up of Special Cells in Universities/Institutions

The Commission has set up Special Cells in various universities/institutions with a view to ensure effective implementation of the various orders for admission, employment, reservation in hostels, introduction of remedial courses and other measures for improvement in the educational level of Scheduled Castes and Scheduled Tribes. The Commission has been providing financial assistance to universities/institutions for meeting the expenditure on salary of staff on 100 percent basis under the scheme. During the year 1990-91, the Commission accepted three proposals for the setting up of such cells, thus aggregating the total number of special cells approved to 90 as on 31.3.1991.

The Commission's assistance for Special Cells is available upto the period ending 31st March.1992 which is further extendable upto 31.3.1995, if the university/institution concerned sends assurance from the State government for taking over the liability of the staff of SC/ST Cell w.e.f. 1.4.1995.

14.07 Junior Research Fellowships for Scheduled Caste/Tribe Students

Earlier there was reservation for Scheduled Caste/Scheduled Tribe students to the extent of 10 per cent of the Junior Research Fellowhips allocated to various universities under the UGC scheme "JRF at any one given time basis". After the introduction of the NET-JRF examination by the UGC, provision of reservation of 10 per cent positions of JRF for SC/ST candidates

was abolished and in its place provision for relaxation of upto 10 per cent in the cut off marks in the UGC-NET JRF examination given to SC/ST candidates. During May, 1989 the Commission decided that since the number of JRF qualified SC/ST candidates was rather small, all SC/ST candidates qualifying JRF examination may be awarded Junior Research Fellowship. In case there is no vacancy under the UGC Scheme 'JRF any one given time basis', the Commission will provide personal supernumerary positions of JRF to the universities in respect of such SC/ST candidates. All the SC/ST JRF qualified candidates were informed of this decision.

Apart from the above, the Commission also awards directly 50 Junior Research Fellowships every year in science and humanities including social sciences to SC/ST candidates through open selection. As per the revised procedure for open selection, candidates who could not qualify the UGC NET/Joint UGC-CSIR-JRF examination even at the relaxed standard are interviewed and selected for the award. Accordingly the awards for the year 1989-90 and 1990-91 have since been finalised.

14.08 Reservation of Research Associateships

The Commission has set aside 40 positions of Research Associateships for Sceduled Caste/Tribe candidates every year. During the year 1990-91, the Commission finalised the awards against the annual quota of 40 positions each for the year 1987-88 and 1988-89 and also invited applications against the quota for the year 1989-90.

14.09 Reservation of Teacher Fellowships

With a view to provide opportunities to teachers belonging to SC/ST categories working in affiliated colleges, the Commission has instituted 50 teacher fellowships (20 for Ph.D and 30 for M.Phil.) under the scheme of 'Direct Award' to teachers belonging to SC/ST categories'. The duration of short-term fellowship for pursuing the M.Phil. courses is one year. The normal tenure of long-term teacher fellowship for conducting research work for Ph.D. degree is three years(including one year for M.Phil.). However, the tenure of long-term fellowship can be extended by one year in genuine cases. The Commission awarded 50 teacher fellowships (24 Ph.D. and 26 M.Phil.) during the year 1990-91 under the scheme.

14.10 Postgraduate Scholarships to Candidates Belonging to Scheduled Castes/Tribes etc. of Border Hill Areas

The Commission has instituted 25 scholarships for students belonging to Scheduled Castes/Tribes and backward communities of border hill areas for enabling them to undertake postgraduate studies in science, humanities and social sciences.

14.11 Remedial Coaching Classes

The Commission has been implementing the scheme of remedial coaching classes for students belonging to weaker sections of the society, specially the Scheduled Castes and Scheduled Tribes. Such classes generally have a student-teacher ratio of not more than 20:1.

14.12 Assistance to Colleges Catering to the needs of Scheduled Caste and Scheduled Tribe Students

As per the Eighth Plan guidelines circulated to colleges during the year, the pattern of assistance to colleges catering to the needs of Scheduled Caste and Scheduled Tribe students during the Eighth Plan will be as follows beginning from the year 1990-91.

Sl.No.	Student Enrolment	Ceiling of Assistance
1.	100 to 500	Rs. 5 lakhs
2.	501 to 1000	Rs. 6 lakhs
3.	1001 to 2000	Rs. 8 lakhs
4.	2001 to 3000	Rs. 9 lakhs
5.	3001 and above	Rs.10 lakhs

14.13 Reservations in the UGC Office

The Commission continued its efforts during the year to give due representation to the reserved categories of Scheduled Castes and Scheduled Tribes and to make good the shortfall wherever existing in the office of the Commission in accordance with the orders issued by the Government of India on the subject.

The following officials belonging to the reserved categories of Scheduled Castes and Scheduled Tribes were appointed during the year under report:

Sl. No.	Cadre	Appointment made by direct recruitment		Post filled by Promotion	
		Scheduled Caste	Scheduled Tribe	Scheduled Caste	Scheduled Tribe
1.	Education Officer	1	-	-	-
2.	Under Secretary	-	-	2	-
3.	Section Officer	-	-	1	-
4.	Junior Stenographer	1	-	-	-
5.	Group 'D'	3	1	-	-

Section-15

HIGHER EDUCATION AND WOMEN

15.01 There has been phenomenal expansion of educational opportunities for women in the field of higher education - both general and technical. The response of women to avail these growing opportunities has been equally overwhelming as reflected by the trend in women enrolment in all faculities and at all levels of education. Women education at the university and college levels has been diversified and reoriented in tune with the changing requirements of the society, industry and trade. More and more women have been competing for admission to specialised and professional courses year after year. The following paragraphs present an account of the expansion of women participation in higher education both in terms of numbers and other opportunites as well as the efforts made by the Commission in this regard.

15.02 **Growth of Enrolment**

There has been remarkable growth in the number of women enrolled in institutions of higher education as shown in Table 15.1.

It will be seen from the table that women enrolment has grown from a mere 0.40 lakhs in 1950-51 to 14.37 lakhs in 1990-91 recording an increase of more than 36 times over the forty-year period. The number of women enrolled per hundred men enrolled during this period has gone up more than three times from 14 in 1950-51 to 48 in 1990-91.

Table 15.2 shows the enrolment of women as a proportion of total enrolment during the period 1981-82 to 1990-91. It will be seen that enrolment of women as percentage of total enrolment increased progressively from 27.7 per cent in 1981-82 to 29.6 per cent in 1985-86 and 32.5 per cent in 1990-91. In absolute terms, the number of women enrolled increased from 8.17 lakhs in 1981-82 to 14.37 lakhs in 1990-91.

Table 15.1

ENROLMENT OF WOMEN AND THEIR NUMBER PER HUNDRED MEN

	1950-51	55-56	60-61	65-66	75-76	81-82	82-83	83-84	84-85	85-86	86-87*	87-88*	88-89*	89-90*	90-91*
Total women enrolment (in thousands)	40	84	150	271	595	817	880	940	992	1067	1149	1224	1292	1367	1437
Number of women per hundred men	14	17	23	24	33	38	39	40	41	42	44	46	46	47	48

* Estimated

Table 15.2
Total enrolment and enrolment of Women

Year	Total Enrolment	Women Enrolment	Percentage of women
1981-82	29,52,066	8,16,704	27.7
1982-83	31,33,093	8,80,156	28.1
1983-84	33,07,649	9,40,253	28.4
1984-85	34,04,096	9,92,139	29.1
1985-86	36,05,029	10,67,484	29.6
1986-87*	37,54,409	11,48,849	30.6
1987-88*	39,10,828	12,24,089	31.3
1988-89*	40,74,676	12,91,672	31.7
1989-90*	42,46,878	13,67,495	32.2
1990-91*	44,25,247	14,36,887	32.5

* Estimated

15.03 Women's Colleges

Table 15.3 shows the number of colleges meant exclusively for women. This number has gone up from 624 in 1981-82 to 874 in 1990-91 recording an increase of over 40 per cent during the decade.

Table 15.3
Women's Colleges

Year	Number of colleges for women only
1981-82	624
1982-83	647
1983-84	676
1984-85	712
1985-86	741
1986-87	780
1987-88	786
1988-89	824
1989-90	851*
1990-91	874*

* Provisional

15.04 State-wise distribution of Women Enrolment

State-wise distribution of enrolment of women for the years 1986-87 to 1990-91 is given in *Appendix -XXXII*.

It will be seen that enrolment of women as a percentage of total enrolment during this period has gone up in all the States. The all-India average of women enrolment as a percentage of total enrolment rose from 30.6 in 1986-87 to 32.5 in 1990-91. As in the earlier years, Kerala (53.0%) continued to lead in terms of women enrolment as percentage of its total enrolment in 1990-91 followed by Punjab (48.2%), Delhi (46.3%). Haryana (42.2%), Meghalaya/Nagaland (39.0%) and Tamil Nadu (38.5%). On the other hand, as in earlier years, Bihar remained at the bottom with women enrolment only 16.4 per cent of its total enrolment in 1990-91. As many as 14 states and the Union Territory of Delhi had percentage of women enrolment higher than the all-India average of 32.5%. These were Gujarat, Haryana, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya/Nagaland, Punjab, Tamil Nadu, and West Bengal/Tripura/Sikkim.

15.05 Stage-wise Distribution

Sex-wise distribution of enrolment at different stages of study is given in *Appendix-XXXIII*. It will be seen that during the period 1981-82 to 1990-91, enrolment of women as a percentage of total enrolment has been consistently going up at all levels viz. graduate, postgraduate and reserch levels. For example at the graduate level enrolment of women as a percentage of total enrolment increased from 27.7% in 1981-82 to 32.3% in 1990-91. Similarly at the post-graduate level, the corresponding increase was from 28.6% to 34.2% and at the research level from 27.7% to 36.7%. It is interesting to observe that percentage of women enrolment at the research level has increased faster than percentage enrolment at other levels. Women enrolment at the diploma/certificate level which was 25.5% of total enrolment at that level in 1990-91 showed a mixed trend, rising in one year and falling in the other, during the period under reference. In the last three years, however, it has been consistently on the rise.

15.06 Faculity-wise Distribution

Faculty-wise distribution of women enrolment given in *Appendix-XXXIV* shows that women enrolment in each faculty as a percentage of total enrolment in that faculty registered a gradual increase from 1981-82 to 1990-91 except that in some faculties it declined in a certain year so as to rise again the following year. The highest percentage of women enrolled in any faculty was recorded by the faculty of Education with 53.4 per cent of its total enrolment in 1990-91 accounted for by women, followed by the faculty of Arts (44.0%),'others' (39.4%), Science (33.3%), Medicine (32.3%) and Commerce (20.8%). It is interesting to note that even in professional faculties like Engineering/Technology, Veterinary Science and Law, women enrolment as a percentage of total enrolment has consistenlly been on the rise during the period thus indicating a healthy trend of more and more women opting for professional courses.

15.07 Promotion of Women's Studies in Universities

Women's Studies is the pursuit of a more comprehensive, critical and balanced understanding of social reality. Its essential components include: (i) Women's contribution to the social processes (ii) Women's perception of their own lives, the broader social reality and their struggles and aspirations; (iii) Roots and structures of inequality that lead to marginalisation, invisibility and exclusion of women from the scope, approaches and conceptual framework of most intellectual enquiry.

The Commission is assisting universities for promoting women's studies programmes and setting up of Centres/Cells for women's studies to undertake research projects, development of curricula, training and extension as a motivator for various Adult Education Progrmmes and as a critical instrument for social and academic development.

The Commission has a Standing Committee on Women's Studies which reviews, advises and monitors the implementation of the scheme. The Committee is assisted by two sub-committees, one which scrutinises proposals for setting up centres/cells in the university system and also monitors the work of existing centres/cells and the other which scrutinises the research proposals relating to women's studies.

The Commission's assistance to universities for development of women's studies is to continue upto March, 1995. As on 31st March, 1991 the Commission provided assistance to 20 universities and 9 colleges/university departments for setting up women's studies centres/cells. In addition the Commission also provided assistance for the research projects concerning women's studies.

15.08 Part-time Research Associateships for Women

The Commission annually awards 40 part-time Research Associateships for women with a view to provide an opportunity to research scholars who have shown talent and competence to take up post-doctoral research work independently or on project assignment in Science, Humanities/Social Sciences and Engineering/Technology. During the period under report, the Commission finalised the awards against the quota of 1988-89 and also invited applications against the quota for the year 1989-90.

Section-16

ORGANISATIONAL SET UP AND FINANCES

16.01 Organisational Set-up

The Commission consists of twelve members. The Chairman and the Vice-Chairman are its full-time working members. The Secretariat of the Commission is headed by a Secretary. He is assisted by a Financial Adviser, a Director (Science) and two Additional Secretaries.

The Secretariat of the Commission is organised on the pattern of Bureaus, Divisions and Sections. The basic unit is a Section which is headed by a Section Officer who has adequate supporting staff comprising of Assistants, Upper Division Clerks and Lower Division Clerks/Typists, normally numbering between five and eight depending on the work-load. Usually, for two sections, there is a Branch Officer who is designated Under Secretary/Education Officer or an officer of equivalent rank. Normally, two to three sections constitute a Division. There are four divisions dealing with development programmes of universities and colleges and four divisions dealing with research programmes, selections and awards and adult education etc. There are also separate divisions dealing with international cooperation, mass communication and information/statistics. A division is headed by a Deputy Secretary or an Officer of equivalent rank like Co- ordinator, Principal Scientific Officer, etc. In some cases a division is headed by a Joint Secretary called Bureau Head. The work of a group of Joint Secretaries/ Deputy Secretaries/other officers of equivalent rank is assigned to Additional Secretary/Director (Science)/ Financial Advisor called Bureau Chief. At present the entire work of the Commission is looked after by four Bureau Chiefs who are assisted by eight Bureau Heads. For specialised items of work, which are generally of a specified duration, or for specific assignments, the Commission engages Consultants. At present, there are three Consultants who advise the Commission on matters pertaining to data-based systems of management, mass communication and educational technology, and physical education & sports. During the year, a Chief Adviser was appointed to advise the Commission on its pilot project titled "Pre-School Television".

According to Section 10 of the UGC Act, the Commission appoints a Secretary and other employees as necessary for the efficient functioning of the Commission. These appointments are made on the basis of the recruitment rules framed by the Central Government. The manner of appointment includes direct recruitment, promotion, deputation and contractual appointment.

16.02 Non-Plan Funds

The University Grants Commission received a grant-in-aid of Rs.24,420 lakhs from the Government of India during the year under report. In addition, an amount of Rs. 410.71 lakhs was obtained under miscellaneous items. Thus the total non-plan receipts (including

opening balance of Rs.1.59 lakhs) during 1990-91 were Rs.24,832.30 lakhs and against this grants paid amounted to Rs.24,819.77 lakhs. Detailed break-up of non-plan grants paid under various schemes during 1990-91 is given in Table 16.1 below:

Table-16.1

Statement of non- plan grants paid under various schemes during 1990-91

S.No.	Purpose	Amount
		(Rs. in lakhs)
1.	Pay Establishment	
	a. Pay of Officers	110.95
	b. Allowances, Honoraria (including DA, Interim Relief, Bonus, CCA, LTC, TA etc.)	59.58 120.38
	c. TA/DA of Commission members	1.61
	d. Other charges like printing & Stationery, postage, telephones, electricity/water charges, upkeep of motor vehicles, publication, library books and journals, purchase of furniture and fixture, maintenance of UGC buildings, other expenditure, rent rates and taxes, departmental charges, conveyance allowance etc.	131.09
	e. Contributions for CGHS, Pension & leave salary, CP Fund, GP fund, gratuity etc.	54.04
		477.65
2.	Maintenance grants to Central Universities	14,865.09
3.	Maintenance grants to Institutions deemed to be Universities	2,983.01
4.	Maintenance grants to Anna and Roorkee Universities, Birla Institute of Technology (Ranchi) and Thapar Institute of Engineering and Technology (Patiala) for specific purposes.	98.42

S.No.	Purpose	Amount
5.	Maintenance grants to Constituent/ Affiliated Colleges of Delhi University	5,417.62
6.	Maintenance grants to Constituent/ Affiliated College of B.H.U.	52.59
7.	House Building Advance to Institutions deemed to be universities and central Universities.	Payment made under General Plan.
8.	Teacher awards for schemes like Teacher Fellowship (both general & SC/ST Candidates), National Fellowship/ Associateship, National Lectures, Emeritus Fellowship etc.)	39.83
9.	Research Fellowships/Associateships	447.45
10.	Scholarships/Fellowships under Engineering and Technology.	169.82
11.	Grants to non-university institutions	17.49
12.	Media Centres (Mass)	250.79
		24,819.77

From the above table it would be observed that a major component of the non-plan funds was earmarked for meeting the maintenance expenditure of central universities, deemed universities and colleges affiliated to the central universities. Out of the total non-plan grants, about 59.89 per cent was paid as block grant to central universities, 12.01 per cent to deemed to be universities, 0.39 per cent to Anna and Roorkee Universities and Birla Institute and Thapar Institute for certain specific purposes and 22.03 per cent for maintenance of colleges affiliated to central universities. A grant of Rs. 925.38 lakhs (3.72 per cent) was given to provide various incentives to teachers and for various categories of research fellowships, grants to non-university institutions and media centres.

16.03 **Plan Funds**

During the year under report, the Commission received grants-in-aid of Rs.12100 lakhs from the Government of India for general dvelopment of the universities and Institutions including SACC programme. In addition, a separate allocation of Rs.1,800 lakhs was also made available for development of engineering and technical education in the universities/institu-

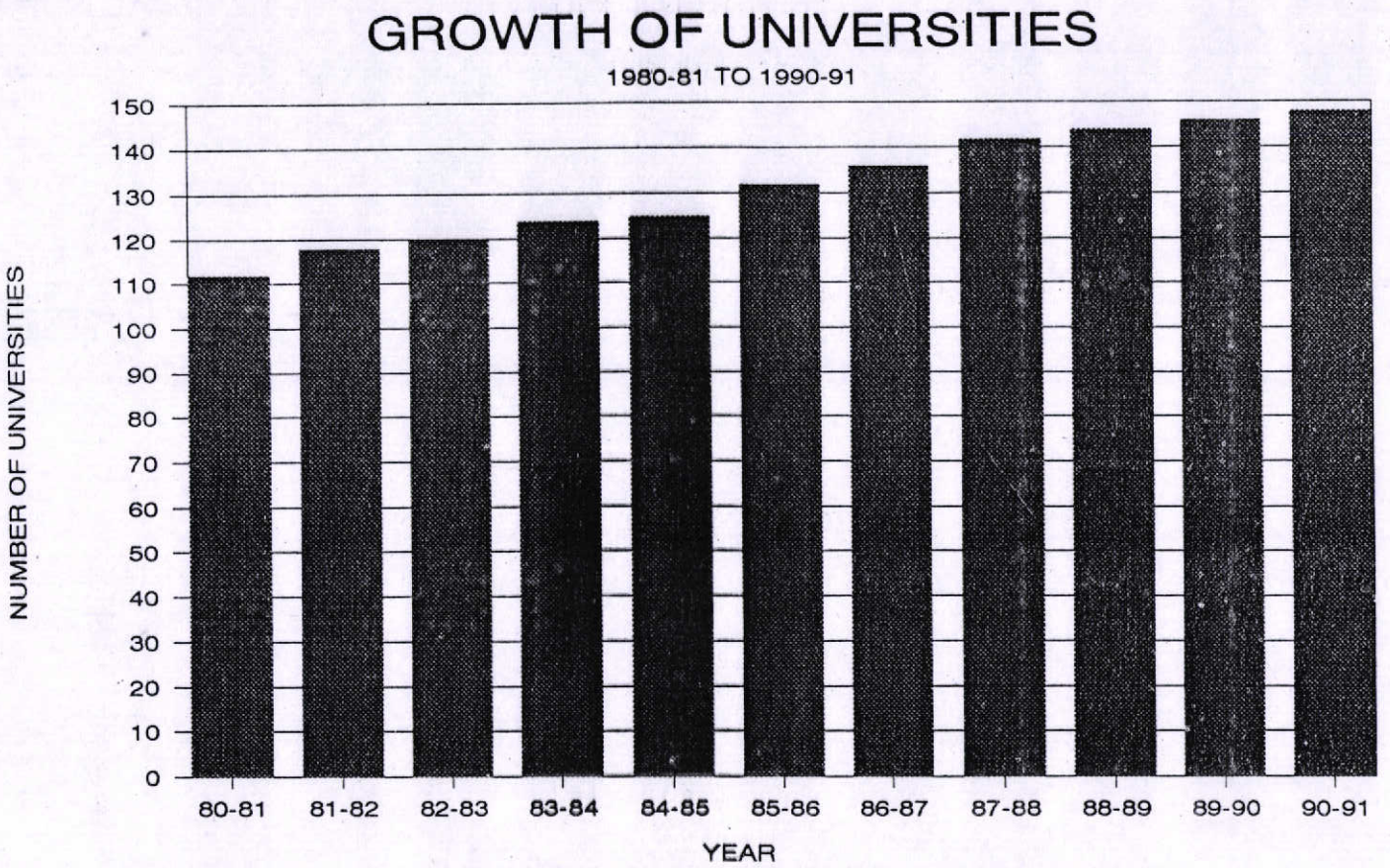
tions eligible to receive grant under the UGC Act. Miscellaneous receipt under Plan including Engineering and Technology was a marginal amount of Rs. 92.17 lakhs which was mainly obtained by way of interest on bank accounts, refund of unspent balances out of grants paid in previous years etc. Thus the total plan receipts (including Engineering/Technology and opening balance of Rs.85.19 lakhs) during 1990-91 were Rs.14077.36 lakhs. A plan grant of Rs.13,934.54 lakhs was paid to various institutions as indicated in Table 16.2 below.

Table 16.2
Statement of Plan Grants Paid under Six Major Schemes of UGC during 1990-91

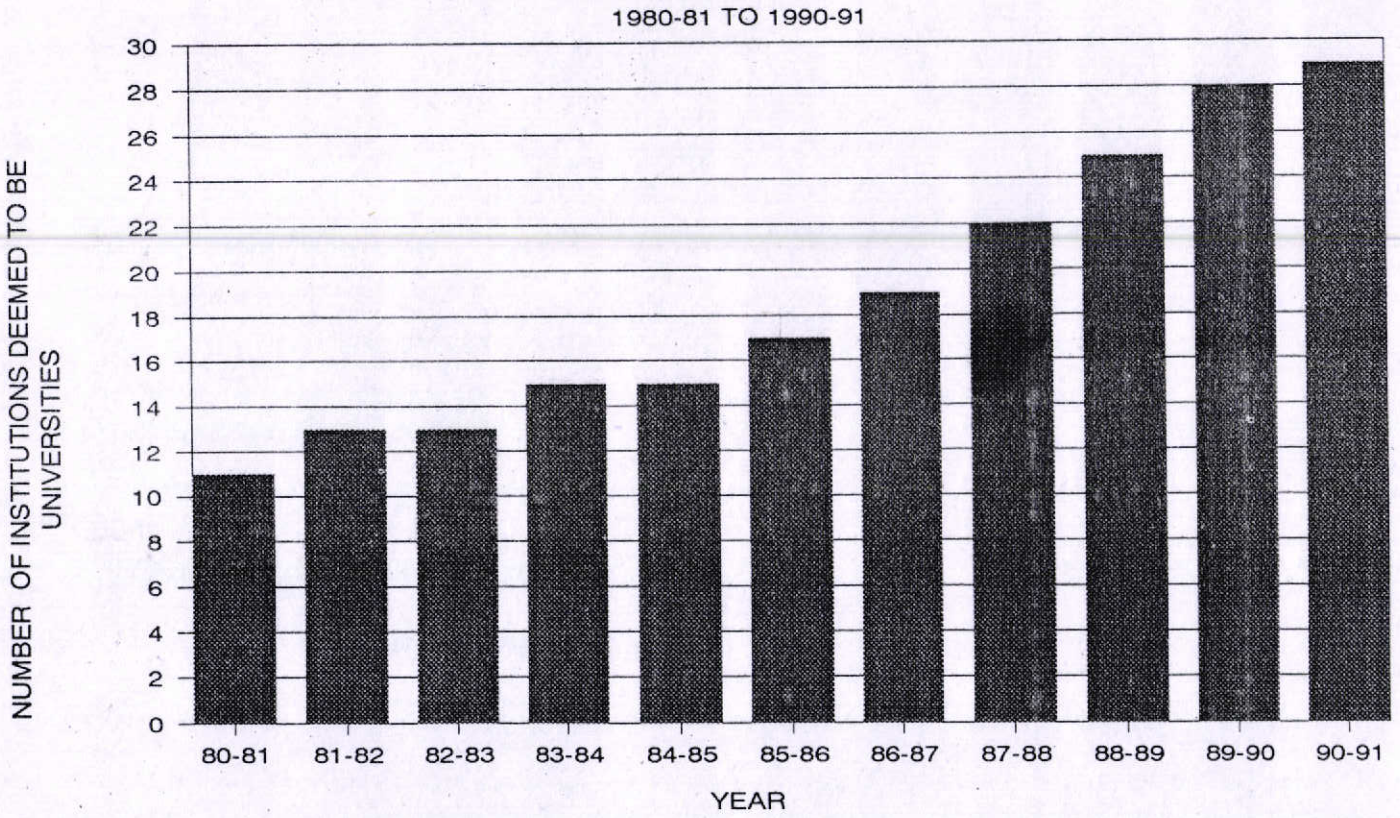
S.No. Scheme	Universities	Colleges	Misc.	Total
		(Rs. in lakhs)		
1. Restructuring of courses, Adult, Continuing and Extension Education Programmes	629.61	59.06	14.64	703.31
2. Programmes for Quality Improvement of Education	3,386.30	2,351.81	16.66	5,754.77
3. Programmes for Quality Improvement of Research and SACC*	4,617.65	396.22	87.12	5,100.99
4. Mass Communication and Improvement of Weaker Sections of the Society	339.16	55.84	13.25	408.25
5. Establishment of Autonomous Colleges and Improvement of Management System of Universities and the UGC	0.02	57.62	103.31	160.95
6. Development of Engineering and Technology	1,799.79	6.48		1,806.27
Total:	10,772.53	2,927.03	234.98	13,934.54

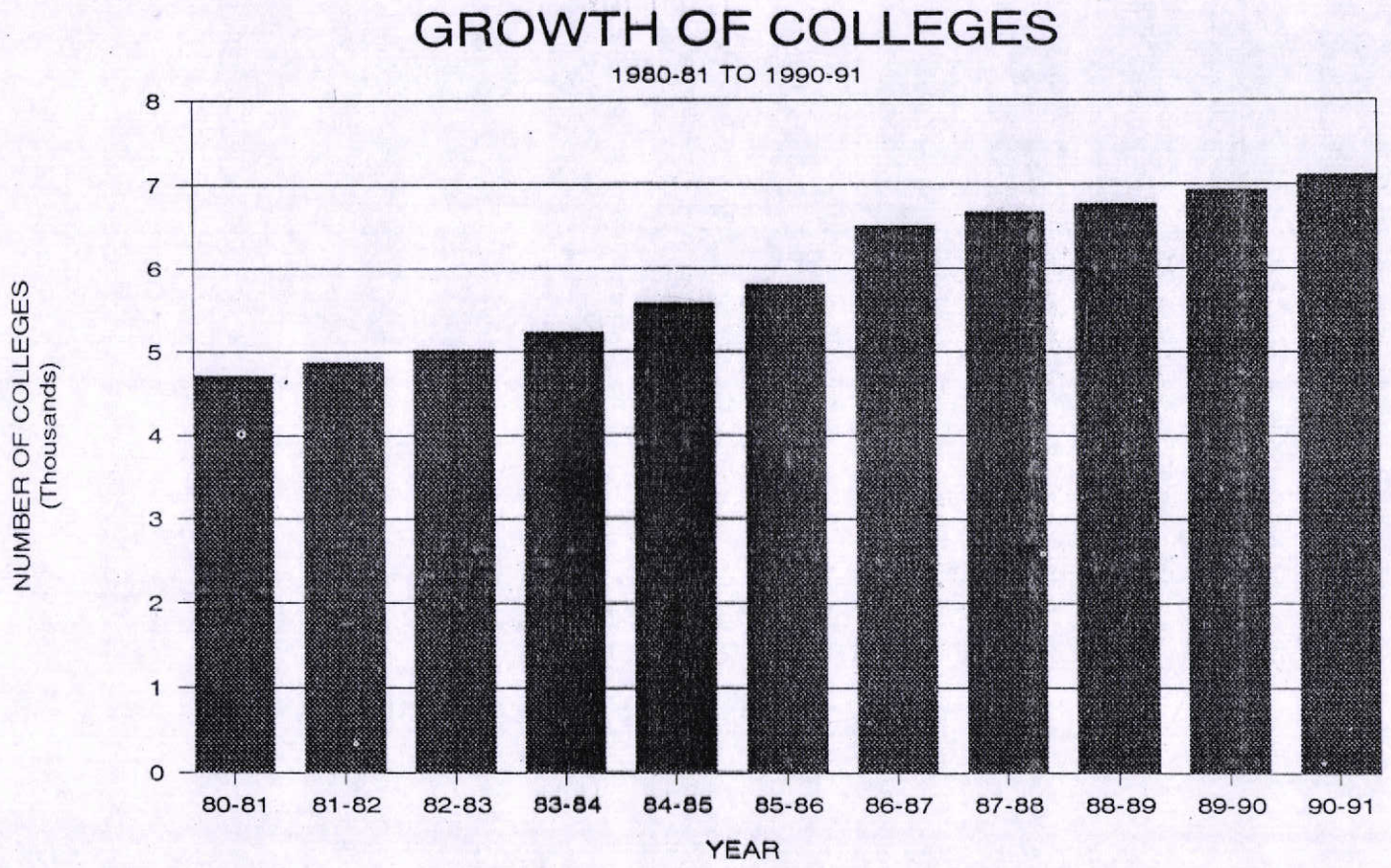
* Science Advisory Committee to the Cabinet.

ILLUSTRATIONS AND APPENDICES


GROWTH OF UNIVERSITIES
1980-81 TO 1990-91
NUMBER OF UNIVERSITIES
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
80-81
81-82
82-83
83-84
84-85
85-86
86-87
87-88
88-89
89-90
90-91
YEAR

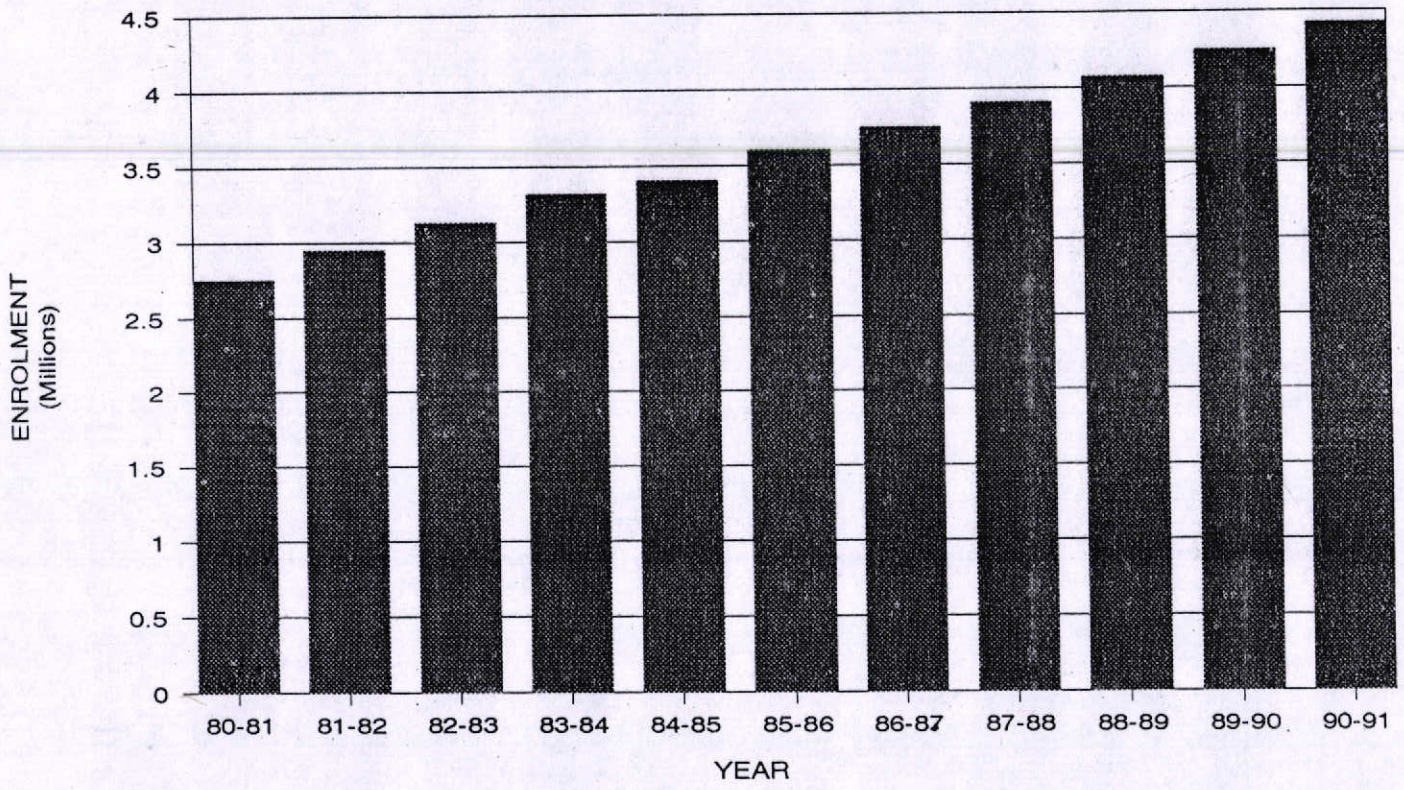
GROWTH OF INSTITUTIONS DEEMED TO BE UNIVERSITIES




GROWTH OF COLLEGES
1980-81 TO 1990-91
NUMBER OF COLLEGES
(Thousands)
8
7
6
5
4
3
2
1
0
80-81
81-82
82-83
83-84
84-85
85-86
86-87
87-88
88-89
89-90
90-91
YEAR

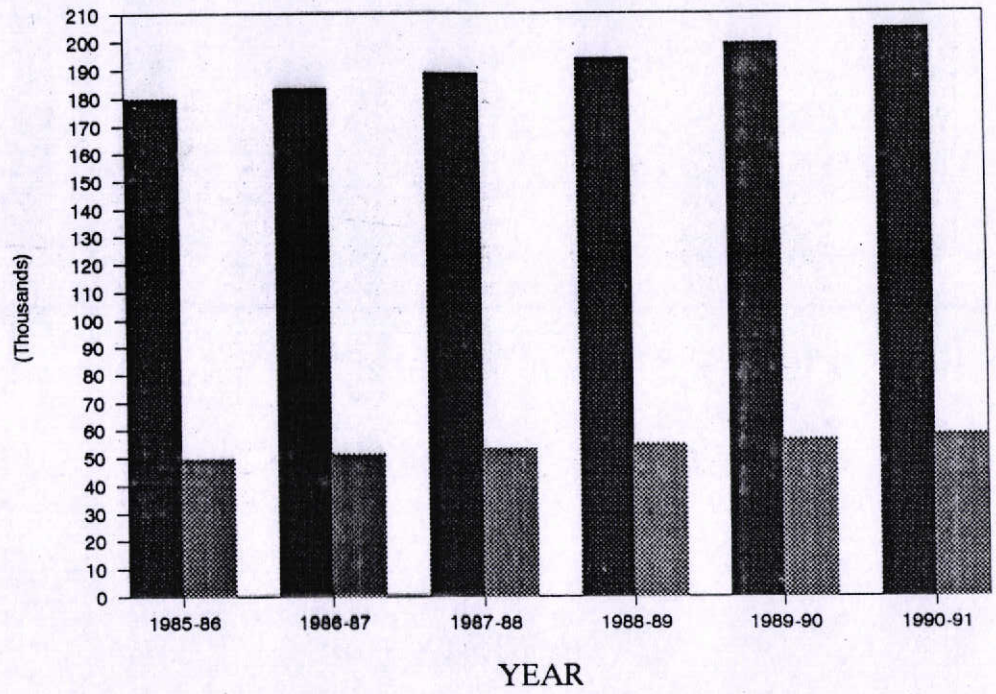
GROWTH OF STUDENT ENROLMENT

1980–81 TO 1990–91
(UNIVERSITY LEVEL)



TEACHING STAFF IN UNIVERSITY DEPARTMENTS/UNIVERSITY COLLEGES AND AFFILIATED COLLEGES

1985–86 TO 1990–91



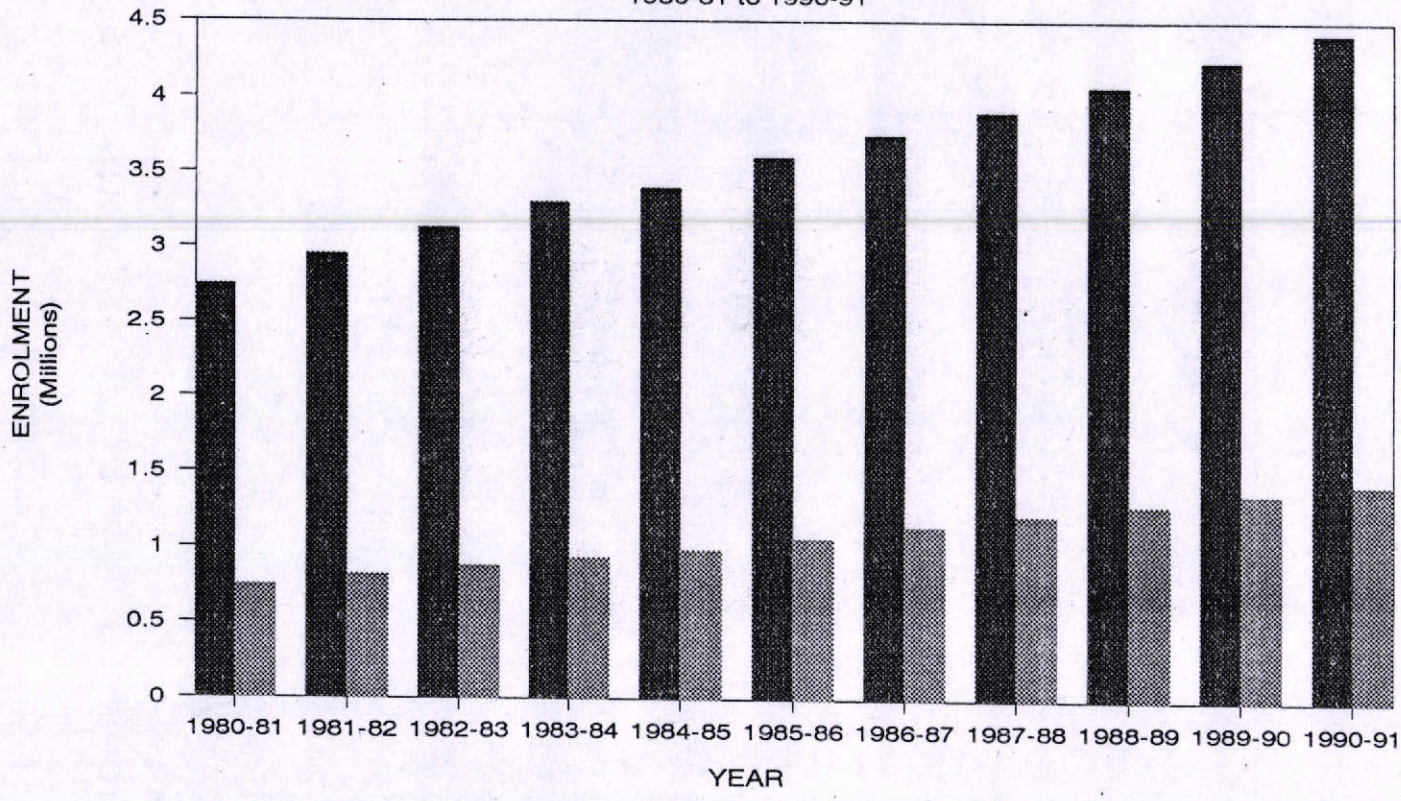
Includes Principals/Senior Lecturers/Readers/
Assistant Professors/Temporary Lecturers and Tutors/Demonstrators (AFFILIATED COLLEGES)

Includes Professors, Readers, Lecturers and Tutors/Demonstrators (UNIVERSITY COLLEGES)

WOMEN ENROLMENT

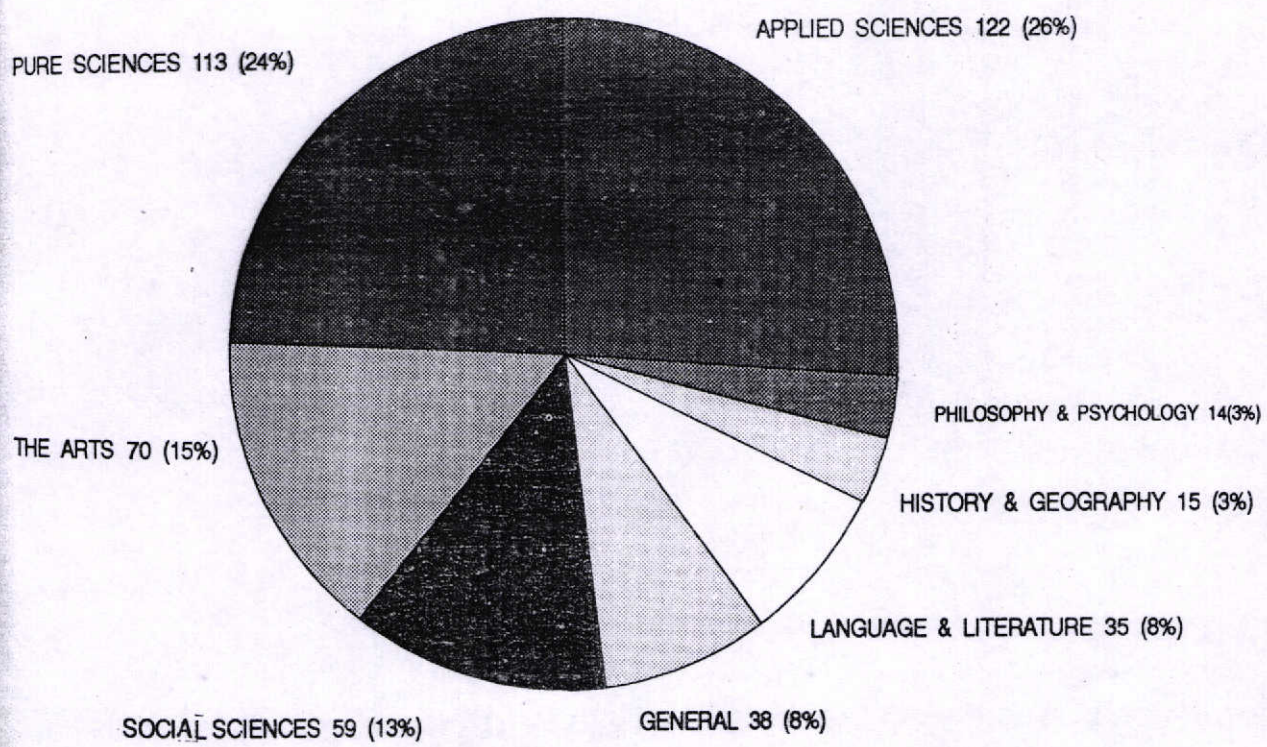
(University Level)

1980-81 to 1990-91



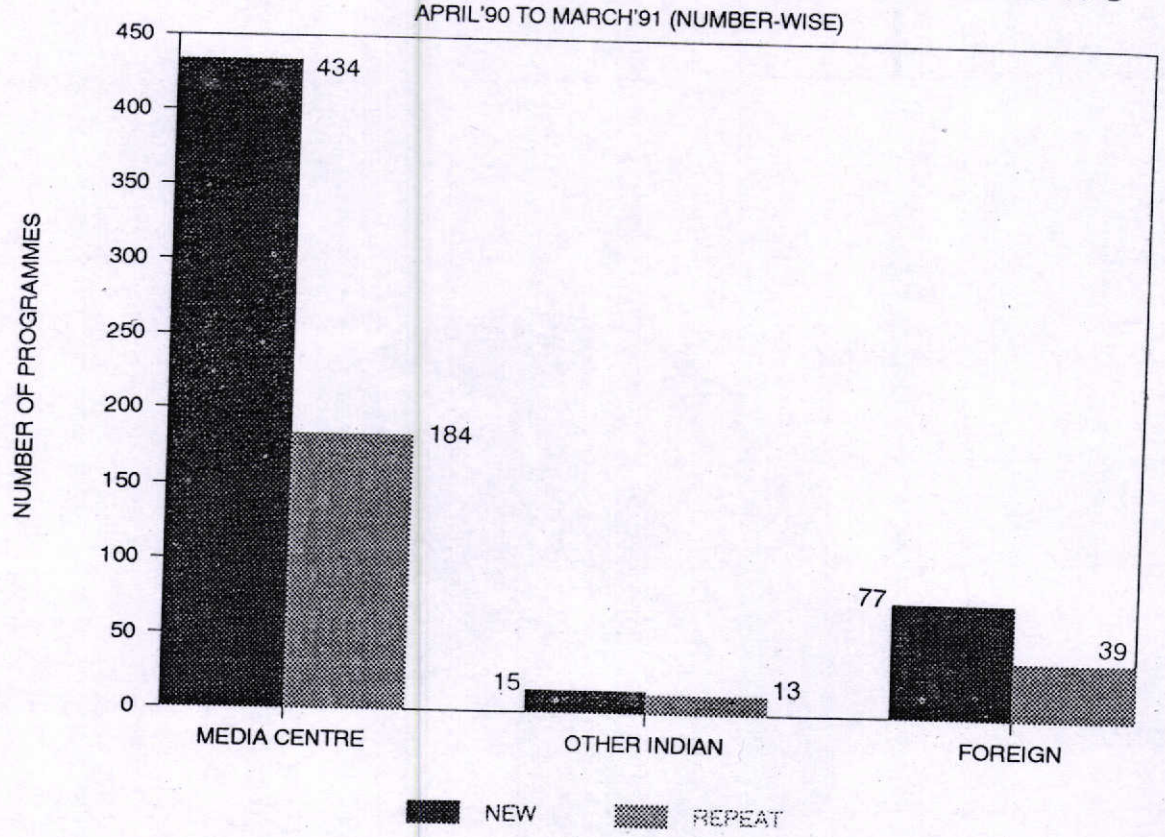
PROGRAMMES RECEIVED FROM MEDIA CENTRES

APRIL '90 TO MARCH '91 (SUBJECT - WISE)



PROGRAMMES TELECAST - NEW & REPEATS

APRIL'90 TO MARCH'91 (NUMBER-WISE)



APPENDICES
INTRODUCTION

Time series data relating to Universities and Colleges with relevant break-up details are presented in tabular statements at various Appendices in this Report. It is to specify that data for the years 1986-87 to 1990-91 as incorporated in the tables at Appendices II, III, IV, V, VI, X, XI, XXXII, XXXIII & XXXIV are estimates. Data for the years 1989-90 & 1990-91 as given in the tables at Appendices VII, VIII & IX are provisional. Table at Appendix XII shows provisional data for the years 1988-89 & 1989-90.

APPENDIX-I

List of Universities and Institutions Deemed to be Universities in India as on 31.3.1991

Sl. No.	Name of the University /Institution	Year of establishment
1.	Calcutta	1857
2.	Bombay	1857
3.	Madras	1857
4.	Allahabad	1887
5.	Banaras Hindu	1916
6.	Mysore	1916
7.	Patna	1917
8.	Osmania	1918
9.	Aligarh Muslim	1921
10.	Lucknow	1921
11.	Delhi	1922
12.	Nagpur	1923
13.	Andhra	1926
14.	Agra	1927
15.	Annamalai	1929
16.	Kerala	1937
17.	Utkal	1943
18.	Dr. Hari Singh Gaur	1946
19.	Rajasthan	1947
20.	Punjab	1947
21.	Gauhati	1948
22.	Kashmir	1949
23.	Roorkee	1949
24.	Poona	1949
25.	M.S. Universityof Baroda	1949
26.	Karnataka	1949
27.	Gujarat	1950
28.	S.N.D.T.Women's	1951
29.	Vishwa Bharati	1951
30.	Bihar	1952
31.	Sri Venkateshwara	1954
32.	Sardar Patel	1955
33.	Jadavpur	1955
34.	Kurukshetra	1956
35.	Indira Kala Sangeet	1956
36.	Vikram	1957
37.	Gorakhpur	1957
38.	Rani Durgavati	1957
39.	Sampurnanand Sanskrit	1958
40.	Marathwada	1958
41.	G.B. Pant University of Agriculture and Technology	1960
42.	Burdwan	1960
43.	Kalyani	1960
44.	Bhagalpur	1960
45.	Ranchi	1960
46.	K.S. Darbhanga Sanskrit	1961
47.	Panjab Agricultural	1962
48.	Punjabi	1962
49.	Orissa University of Agriculture & Technology	1962
50.	North Bengal	1962
51.	Rabindra Bharati	1962
52.	Magadh	1962
53.	Jodhpur	1962
54.	Sukhadia	1962
55.	Shivaji	1962
56.	Devi Ahilya	1964
57.	Jiwaji	1964
58.	Ravi Shankar	1964

APPENDIX-I (Contd.)

Sl. No.	Name of the University /Institution	Year of establishment
59.	University of Agricultural Sciences	1964
60.	Andhra Pradesh Agriculture	1964
61.	Bangalore	1964
62.	Jawaharlal Nehru Krishi	1964
63.	Dibrugarh	1965
64.	Kanpur	1965
65.	Meerut	1965
66.	Madhurai Kamraj	1965
67.	Saurashtra	1965
68.	South Gujarat	1965
69.	Berhampur	1967
70.	Sambalpur	1967
71.	Gujarat Ayurveda	1968
72.	Jawaharlal Nehru	1968
73.	Mahatma Phule Krishi	1968
74.	Calicut	1968
75.	Awadesh Pratap Singh	1968
76.	Assam Agricultural	1968
77.	Guru Nanak Dev	1969
78.	Jammu	1969
79.	Punjabrao Krishi	1969
80.	Haryana Agricultural	1970
81.	Himachal Pradesh	1970
82.	Barkatullah	1970
83.	Rajendra Agricultural	1970
84.	Tamilnadu Agricultural	1971
85.	Cochin	1971
86.	Kerala Agricultural	1972
87.	Gujarat Agricultural	1972
88.	Konkan Krishi	1972
89.	L.N. Mithila	1972
90.	Marathwada Krishi	1972
91.	Jawaharlal Nehru Technological	1972
92.	North Eastern Hill	1973
93.	Kumaun	1973
94.	Hemvati Nandan Bahuguna	1973
95.	Kashi Vidyapith	1974
96.	Bidhan Chandra Krishi	1974
97.	Hyderabad	1974
98.	N.D.University of Agriculture & Technology	1974
99.	C.S. Azad University of Agriculture & Technology	1974
100.	Avadh	1975
101.	Bundelkhand	1975
102.	Rohilkhand	1975
103.	Maharishi Dayanand	1976
104.	Kakatiya	1976
105.	Nagarjuna	1976
106.	Bhavnagar	1978
107.	Anna	1978
108.	Himachal Pradesh Krishi	1978
109.	Manipur	1980
110.	Gulbarga	1980
111.	Mangalore	1980
112.	Birsa Agricultural	1980
113.	Vidyasagar	1981
114.	Sri Jagannath Sanskrit	1981
115.	Sri Krishnadevaraya	1981
116.	Tamil	1981
117.	Bharathiar	1982
118.	Bharathidasan	1982
119.	Sher-e-Kashmir University of Agricultural Sciences & Technology	1982
120.	Andhra Pradesh Open	1982

APPENDIX - (I) (Contd.)

Sl. No.	Name of the University/Institution	Year of establishment
121.	Sri Padmavati Mahila	1983
122.	Amravati	1983
123.	Guru Ghasi Das	1983
124.	Mahatma Gandhi	1983
125.	Mother Teressa	1984
126.	Alagappa	1985
127.	Arunachal	1985
128.	Pondicherry	1985
129.	Goa	1985
130.	Indira Gandhi National Open	1985
131.	Telgu	
132.	Dr. Yashwant Singh Parmar, University of Horticulture & Forestry	1986
133.	Andhra Pradesh University ot Health Scs.	1986
134.	University fo Agricultural Sciences, Dharwad	1986
135.	North Gujarat	1986
136.	Indira Gandhi Krishi	1987
137.	Kota open	1987
138.	Ajmer	1987
139.	Tripura	1987
140.	Kuvempu	1987
141.	Rajasthan Agricultural	1987
142.	Purvanchal	1987
143.	Jamia Millia Islamia	1988
144.	Dr. M.G.R. Medical	1989
145.	Yashwant Rao Chavan Maharashtra Open	1990
146.	Tamilnadu Veterinary & Animal Sciences	1990
147.	North Maharashtra	1991
148.	Nalanda Open	1991
	INSTITUTE ESTABLISHED UNDER STATE LEGISLATURE ACT	
1.	Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow	1983
2.	Sher-I-Kashmir Institute of Medical Sciences, Srinagar	1990
3.	Nizem's Institute of Medical Scs, Hyderabad	1990
	INSTITUTIONS DEEMED TO BE UNIVERSITIES	
1.	Indian Institute of Sciences, Bangalore	1958
2.	Indian Agricultural Research Institute	1958
3.	Gurukul Kangri Vishvavidyalaya, Hardwar	1962
4.	Gujarat Vidyapith, Ahmedabad	1963
5.	Tata Institute of Social Sciences, Bombay	1964
6.	Birla Institute of Technology and Science Pillani	1964
7.	Indian School of Mines, Dhanbad	1967
8.	Central Institute of English and Foreign Languages, Hyderabad	1973
9.	Gandhigram Rural Institute, Gandhigram	1976
10.	School of Planning and Architecture, New Delhi	1979
11.	Dayalbagh Educational Institute, Agra	1981
12.	Sri Sathya Sai Institute of Higher Learning, Prasanthinilayam	1981
13.	Banasthali Vidyapith, Rajasthan	1983
14.	Indian Veterinary Research Institute, Izatnagar	1983
15.	International Institute for Population Sciences, Bombay	1985
16.	Thapar Institute of Engineering & Technology, Patiala	1985
17.	Birla Institute of Technology, Mesra	1986

APPENDIX - (I) (Contd.)

Sl. No.	Name of the University/Institution	Year of establishment
18.	Rajasthan Vidyapith	1987
19.	Rashtriya Sanskrit Vidyapith, Tripati	1987
20.	Sri Lal Bahadur Shastri Sanskrit Vidyapith, New Delhi	1987
21.	Tilak Maharashtra Vidyapith, Pune	1987
22.	Sri Avinash Lingam Institute for Home Sciences & Higher Education for Women	1988
23.	Central Institute of Higher Tibetan Studies	1989
24.	National Dairy Research Institute	1989
25.	Central Institute of Fisheries Education	1989
26.	Jamia Hamdard, New Delhi	1989
27.	National Museum Institute of the History of Art Conservation & Museology, Delhi	1989
28.	Deccan College Post-Graduate and Research Institute, Pune	1990
29	Jain Vishva Bharat Institute, Karnal Haryana	1991

APPENDIX-II

Growth of Student Enrolment (1971-72 to 1990-91)

Year	Total Enrolment	Increase over the preceding year	Percentage increase
1971-72	20,65,041	1,11,341	5.7
1972-73	21,68,107	1,03,066	5.0
1973-74	22,34,385	66,278	3.1
1974-75	23,66,541	1,32,156	5.9
1975-76	24,26,109	59,568	2.5
1976-77	24,31,563	5,454	0.2
1977-78	25,64,972	1,33,409	5.5
1978-79	26,18,228	53,256	2.1
1979-80	26,48,579	30,351	1.2
1980-81	27,52,437	1,03,858	3.9
1981-82	29,52,066	1,99,629	7.3
1982-83	31,33,093	1,81,027	6.1
1983-84	33,07,649	1,74,556	5.6
1984-85	34,04,096	96,447	2.9
1985-86	36,05,029	2,00,933	5.9
1986-87	37,54,409	1,49,380	4.1
1987-88	39,10,828	1,56,419	4.2
1988-89	40,74,676	1,63,848	4.2
1989-90	42,46,878	1,72,202	4.1
1990-91	44,25,247	1,78,369	4.2

APPENDIX-III

Growth of Enrolment (Excluding PUC/Inter/Pre-Professional)

during the period from 1986-87 to 1990-91

S.No.	State/Union Territory	1986-87		
		Enrolment	Increase over the preceding year	Percentage Increase
1.	Andhra Pradesh	2,62,141	9,767	3.9
2.	Assam	72,788	2,934	4.2
3.	Bihar	2,69,361	9,360	3.6
4.	Gujarat	2,26,457	8,248	3.8
5.	Haryana	79,214	3,309	4.4
6.	Himachal Pradesh	20,739	1,137	5.8
7.	Jammu & Kashmir	26,659	1,447	5.7
8.	Karnataka	2,53,645	8,506	3.5
9.	Kerala	1,46,119	5,037	3.6
10.	Madhya Pradesh	2,73,099	8,929	3.4
11.	Maharashtra	5,06,454	20,740	4.3
12.	Manipur	10,523	639	6.5
13.	Meghalaya, Mizoram Nagaland	10,760	464	4.5
14.	Orissa	83,084	2,373	2.9
15.	Punjab	1,39,562	5,083	3.8
16.	Rajasthan	1,78,088	5,622	3.3
17.	Tamilnadu	2,73,463	23,816	9.5
18.	Uttar Pradesh	5,11,603	18,111	3.7
19.	West Bengal/Tripura/Sikkim	3,07,946	10,241	3.4
20.	Delhi	1,02,704	3,617	3.7
	Total	37,54,409	1,49,380	4.1

APPENDIX-III (Contd.)

S.No.	State/Union Territory	1987-88		
		Enrolment	Increase over the preceding year	Percen increas
1.	Andhra Pradesh	2,72,286	10,145	3.8
2.	Assam	75,845	3,057	4.0
3.	Bihar	2,79,058	9,697	3.6
4.	Gujarat	2,35,017	8,560	3.6
5.	Haryana	82,668	3,454	4.4
6.	Himachal Pradesh	21,942	1,203	5.8
7.	Jammu & Kashmir	28,189	1,530	5.7
8.	Karnataka	2,62,447	8,802	3.5
9.	Kerala	1,51,335	5,216	3.6
10.	Madhya Pradesh	2,82,330	9,231	3.3
11.	Maharashtra	5,28,080	21,626	4.3
12.	Manipur	11,204	681	6.5
13.	Meghalaya,Mizoram,Nagaland	11,246	486	4.3
14.	Orissa	85,527	2,443	2.9
15.	Punjab	1,44,838	5,276	3.6
16.	Rajasthan	1,83,894	5,806	3.3
17.	Tamilnadu	2,99,552	26,089	8.7
18.	Uttar Pradesh	5,30,379	18,776	3.7
19.	West Bengal/Tripura/Sikkim	3,18,539	10,593	3.4
20.	Delhi	1,06,452	3,748	3.7
	Total	39,10,828	1,56,419	4.2

APPENDIX-III (Contd.)

S.No.	State/Union Territory	1988-89		
		Enrolment	Increase over the preceding year	Percentage increase
1.	Andhra Pradesh	2,82,821	10,535	3.9
2.	Assam	79,030	3,185	4.2
3.	Bihar	2,89,104	10,046	3.6
4.	Gujarat	2,43,901	8,884	3.9
5.	Haryana	86,273	3,605	4.5
6.	Himachal Pradesh	23,214	1,272	5.8
7.	Jammu & Kashmir	29,807	1,618	5.7
8.	Karnataka	2,71,554	9,107	3.5
9.	Kerala	1,56,738	5,403	3.6
10.	Madhya Pradesh	2,91,872	9,542	3.4
11.	Maharashtra	5,50,629	22,549	4.3
12.	Manipur	11,929	725	6.5
13.	Meghalaya, Mizoram, Nagaland	11,753	507	4.5
14.	Orissa	88,041	2,514	2.9
15.	Punjab	1,50,313	5,475	3.8
16.	Rajasthan	1,89,889	5,995	3.3
17.	Tamilnadu	3,28,129	28,577	9.5
18.	Uttar Pradesh	5,49,844	19.465	3.8
19.	West Bengal/Tripura/Sikkim	3,29,497	10,958	3.4
20.	Delhi	1,10,338	3,886	3.7
	Total	**40,74,676**	**1,63,848**	**4.2**

APPENDIX-III (Contd.)

S.No.	State/Union Territory	1989-90		
		Enrolment	Increase over the preceding year	Percentage increase
1.	Andhra Pradesh	2,93,768	10,947	3.9
2.	Assam	82,381	3,351	4.2
3.	Bihar	2,99,743	10,639	3.7
4.	Gujarat	2,53,316	9,415	3.9
5.	Haryana	90,034	3,761	4.4
6.	Himachal Pradesh	24,579	1,365	5.9
7.	Jammu & Kashmir	31,518	1,711	5.7
8.	Karnataka	2,80,977	9,423	3.5
9.	Kerala	1,62,347	5,609	3.5
10.	Madhya Pradesh	3,01,738	9,866	3.4
11.	Maharashtra	5,74,140	23,511	4.3
12.	Manipur	12,701	772	6.1
13.	Meghalaya Mizoram Nagaland	12,282	529	4.5
14.	Orissa	90,629	2,588	2.9
15.	Punjab	1,55,994	5,681	3.6
16.	Rajasthan	1,96,079	6,190	3.3
17.	Tamilnadu	3,59,432	31,303	9.5
18.	Uttar Pradesh	5,70,023	20,179	3.7
19.	West Bengal/Tripura/Sikkim	3,40,832	11,335	3.4
20.	Delhi	1,14,365	4,027	3.7
	Total	42,46,878	1,72,202	4.1

APPENDIX-III (Contd.)

S.No.	State/Union Territory	Enrolment	Increase over the preceding year	1990-91 Percentage increase	Average Annual Compound Rate of Growth during the period from 1986-87 to 1990-91	Percentage increase
1.	Andhra Pradesh	3,05,067	11,299	3.8	3.9	3.9
2.	Assam	85,797	3,416	4.1	4.2	4.2
3.	Bihar	3,10,672	10,929	3.6	3.6	3.7
4.	Gujarat	2,63,059	9,743	3.8	3.8	3.9
5.	Haryana	93,946	3,912	4.3	4.4	4.4
6.	Himachal Pradesh	26,016	1,437	5.8	5.8	5.9
7.	Jammu & Kashmir	33,298	1,780	5.6	5.7	5.7
8.	Karnataka	2,90,661	9,684	3.4	3.5	3.5
9.	Kerala	1,67,942	5,595	3.4	3.5	3.5
10.	Madhya Pradesh	3,11,836	10,098	3.3	3.4	3.4
11.	Maharashtra	5,98,519	24,379	4.2	4.3	4.3
12.	Manipur	13,469	768	6.0	6.3	6.1
13.	Meghalaya/Mizoram/Nagaland	12,828	546	4.4	4.4	4.5
14.	Orissa	93,209	2,580	2.8	2.9	2.9
15.	Punjab	1,61,526	5,532	3.5	3.7	3.6
16.	Rajasthan	2,02,445	6,366	3.2	3.3	3.3
17.	Tamilnadu	3,93,375	33,943	9.5	9.3	9.5
18.	Uttar Pradesh	5,90,808	20,785	3.6	3.7	3.7
19.	West Bengal/Tripura/Sikkim	3,52,238	11,406	3.3	3.4	3.4
20.	Delhi	1,18,536	4,171	3.6	3.7	4.1
	Total	44,25,247	1,78,369	4.2	4.2	

APPENDIX-IV

Student Enrolment in the Universities: Stage-wise (1986-87 to 1990-91)

Stage	1986-87 Enrolment	% of total	1987-88 Enrolment	% of total	1988-89 Enrolment	% of total	1989-90 Enrolment	% of total	1990-91 Enrolment	% of total
Graduate	33,07,634	88.1	34,45,439	88.1	35,89,790	88.1	37,41,500	88.1	38,98,643	88.1
Post-graduate	3,56,669	9.5	3,71,529	9.5	3,87,094	9.5	4,03,453	9.5	4,20,398	9.5
Research	41,299	1.1	43,019	1.1	44,821	1.1	46,716	1.1	48,678	1.1
Diploma/ Certificate	48,807	1.3	50,841	1.3	52,971	1.3	55,209	1.3	57,528	1.3
Total	37,54,409	100.0	39,10,828	100.0	40,74,676	100.0	42,46,878	100.0	44,25,247	100.0

APPENDIX-V

Stage-wise Enrolment : Universities and Affiliated Colleges 1990-91

Stage	University Deptts./ Colleges	Affiliated colleges	Total	% in affiliated colleges			
				1990-91	1989-90	1988-89	1988-87
Graduate	4,75,634	34,23,009	38,98,643	87.8	87.8	87.8	87.7
Post graduate	1,82,873	2,37,525	4,20,398	56.5	56.5	56.6	56.5
Research	41,376	7,302	48,678	15.0	15.0	15.0	15.0
Diploma/ Certificate	32,561	24,967	57,528	43.4	43.4	43.4	43.6
Total	7,32,444	36,92,803	44,25,247	83.4	83.4	83.4	83.3

APPENDIX-VI

Student Enrolment in the Universities : Faculty-wise 1986-87 to 1990-91

Faculty	1986-87		1987-88		1988-89		1989-90		1990-91	
	Enrolment	% of total	Enrolment	% of total	Enrolment	% of total	Enrolment	% of total	Enrolment	% o
Arts (including oriental learning)	15,18,282	40.4	15,81,542	40.4	16,45,414	40.4	17,17,437	40.4	17,89,48	4
Science	7,35,864	19.6	7,68,022	19.6	8,00,266	19.6	8,34,087	19.6	8,69,119	19
Commerce	8,22,216	21.9	8,57,971	21.9	8,93,984	21.9	9,31,765	21.9	9,69,882	21
Education	86,352	2.3	89,949	2.3	93,718	2.3	95,979	2.3	99613	2
Enginnering/ Technology	1,83,966	4.9	1,92,148	4.9	2,01,289	4.9	2,09,371	4.9	2,16,837	4
Medicine	1,27,650	3.4	1,31,013	3.4	1,37,257	3.4	1,42,270	3.4	1,50,458	3
Agriculture	42,800	1.1	43,410	1.1	44,007	1.1	45,229	1.1	46,908	1
Veterinary Science	9,761	0.3	10,168	0.3	10,594	0.3	10,957	0.3	11,063	0
Law	1,98,984	5.3	2,05,318	5.3	2,13,920	5.3	2,22,961	5.3	2,34,538	5
Others	28,534	0.8	31,287	0.8	34,227	0.8	36,822	0.8	37,349	0
Total	37,54,409	100.0	39,10,828	100.0	40,74,676	100.0	42,46,878	100.0	44,25,247	10

APPENDIX-VII

Distribution of Degree Colleges According to Faculty : 1986-87 to 1990-91

Faculty	Number of Degree Colleges				
	1986-87	1987-88	1988-89	1989-90	1990-91
Arts, Science & Commerce	4,353	4,487	4,542	4,643	4,742
Technical/Professional break-up	696	724	741	783	818
(a) Engineering/Technology	253	260	263	268	27
(b) Medicine(including Ayurveda/ Homeopathy/Unani Dentistry/Pharmacy/Nursing)	342	364	375	410	427
(c) Agriculture	68	67	69	70	79
(d) Veterinary Science	33	33	34	35	35
Law	202	210	217	224	232
Physical Education & Education	479	488	495	494	531
Oriental learning	720	714	714	728	728
Music/Fine Arts	62	66	70	70	70
Total	6,512	6,685	6,779	6,942	7,121

Women's Colleges

Year	Number of Colleges for Women only
1980-81	609
1981-82	624
1982-83	647
1983-84	676
1984-85	712
1985-86	741
1986-87	780
1987-88	786
1988-89	824*
1989-90	851*
1990-91	874*

* Provisinal

APPENDIX-VIII

Increase in the Number of Degree Colleges during the period from 1986-87 to 1990-91 : State-wise

State/Union Territory	1986-87		1987-88		1988-89		1989-90		1990-91		Increase during the period from 1986-87 to 1990-91
	No. of colleges (UC+AC)	Increase over the preceding year	No. of colleges (UC+AC)	Increase over the preceding year	No. of colleges (UC+AC)	Increase over the preceding year	No. of colleges (UC+AC)	Increase over the preceding year	No. of colleges (UC+AC)	Increase over the preceding year	
1. Andhra Pradesh	495	3	534	39	545	11	579	34	588	9	93
2. Arunachal Pradesh	3	3	3	-	3	-	4	1	4	-	1
3. Assam	180	9	181	1	185	4	185	-	185	-	5
4. Bihar	617	49	644	27	644	-	644	-	663	19	46
5. Goa	19	19	19	-	24	5	27	3	27	-	8
6. Gujarat	311	9	317	6	319	2	329	10	334	5	23
7. Haryana	142	-1	147	5	150	3	147	-3	147	-	5
8. Himachal Pradesh	34	1	40	6	42	2	42	-	42	-	8
9. Jammu & Kashmir	41	2	41	-	41	-	42	1	44	2	3
10. Karnataka	603	47	648	45	667	99	667	-	685	18	82
11. Kerala	189	1	192	3	191	-1	194	3	194	-	5
12. Madhya Pradesh	502	30	515	13	525	10	549	24	564	15	62
13. Maharashtra	874	40	863	-11	881	18	929	48	1002	73	128
14. Manipur	23	-	24	1	25	1	25	-	25	-	2
15. Meghalya/Mizoram Nagaland	37	3	38	1	38	-	43	5	43	-	6
16. Orissa	248	23	254	6	254	-	270	16	277	7	29
17. Punjab	231	5	227	-4	232	5	232	-	234	2	3
18. Rajasthan	237	16	246	9	246	-	248	2	250	2	13
19. Tamilnadu	311	-	314	3	326	12	338	12	346	8	35
20. Tripura	-	-	12	12	12	-	17	5	17	-	17
21. Uttar Pradesh	964	402	963	-1	964	1	967	3	979	12	15
22. West Bengal/ Sikkim	372	15	381	9	382	1	381	-1	387	6	22
23. Delhi	68	-	68	-	69	1	69	-	70	1	2
24. Pondicherry	11	9	14	3	14	-	14	-	14	-	3
Total	6,512	685	6,685	173	6,779	94	6,942	163	7,121	179	609

UC = University colleges AC = Affiliated colleges

Note: (i) Colleges in the union territories of Andaman & Nicobar islands, Chandigarh, Daman & Diu and Lakshadweep are clubbed with the colleges in Pondicherry, Panjab, Gujarat and Kerala respectively,

(ii) Evening colleges in Delhi are counted as separate colleges as in the case of other concerned states/union territories in the country.

APPENDIX-IX

Increase in the Number of Affiliated Degree Colleges (Arts, Science and Commerce only) during the period from 1986-87 to 1990-91 : State-wise

State/Union Territory	1986-87 No. of colleges (UC+AC)	Increase over the preceding year	1987-88 No. of colleges (UC+AC)	Increase over the preceding year	1988-89 No. of colleges (UC+AC)	Increase over the preceding year	1989-90 No. of colleges (UC+AC)	Increase over the preceding year	1990-91 No. of colleges (UC+AC)	Increase over the preceding year	Increase during the period from 1986-87 to 1990-91
1. Andhra Pradesh	323	4	343	20	350	7	357	7	357	-	34
2. Arunachal Pradesh	3	3	3	-	3	-	4	1	4	-	1
3. Assam	150	9	150	-	151	1	152	1	152	-	2
4. Bihar	448	48	467	19	467	-	467	-	486	19	38
5. Goa	10	10	10	-	14	4	17	3	17	-	7
6. Gujarat	207	7	212	5	210	-2	219	9	222	3	15
7. Haryana	107	-	111	4	112	1	111	-1	112	1	5
8. Himachal Pradesh	29	1	33	4	33	-	33	-	33	-	4
9. Jammu & Kashmir	25	2	25	-	25	-	25	-	26	1	1
10. Karnataka	373	19	404	31	411	7	410	-1	421	11	48
11. Kerala	130	-	131	1	131	-	133	2	133	-	3
12. Madhya Pradesh	385	25	399	14	408	9	430	22	445	15	60
13. Maharashtra	563	15	565	2	582	17	613	31	634	2	71
14. Manipur	19	-	20	1	21	1	21	-	21	-	2
15. Meghalya/Mizoram/ Nagaland	28	3	29	1	29	-	34	5	34	-	6
16. Orissa	175	21	179	4	179	-	195	16	202	7	27
17. Punjab	180	5	179	-1	183	4	183	-	185	2	5
18. Rajasthan	136	8	141	5	141	-	142	1	142	-	6
19. Tamilnadu	204	-4	206	2	212	6	212	-	212	-	8
20. Tripura	-	-	9	9	9	-	13	4	13	-	13
21. Uttar Pradesh	390	-	390	-	391	1	391	-	403	12	13
22. West Bengal/ Sikkim	295	14	306	11	306	-	306	-	310	4	15
23. Delhi	46	-	46	-	46	-	46	-	48	2	2
24. Pondicherry	6	4	7	1	7	-	7	-	7	-	1
Total	4,232	194	4,365	133	4,421	56	4,521	100	4,619	98	387

UC = University colleges AC = Affiliated colleges

Note: (i) Colleges in the union territories of Andaman & Nicobar islands, Chandigarh, Daman & Diu and Lakshadweep are clubbed with the colleges in Pondicherry, Panjab, Gujarat and Kerara respectively,

(ii) Evening colleges in Delhi are counted as separate colleges as in the case of other concerned states/union territories in the countryu.

APPENDIX-X

Number and Distribiution of Teaching Staff in the University Departments/University colleges according to Designation (1986-87 to 1990-91)

Year	Professors	Readers	Lecturers*	Tutros/Demo-nsrators	Total
1986-87	6,445	13,248	29,360	2,097	51,150
	(12.6)	(25.9)	(57.4)	(4.1)	(100.0)
1987-88	6,858	13,982	30,198	2,127	53,165
	(12.9)	(26.3)	(56.8)	(4.0)	(100.0)
1988-89	7,037	14,347	31,390	2,199	54,973
	(12.8)	(26.1)	(57.1)	(4.0)	(100.0)
1989-90	7,262	14,864	32,337	2,269	56,732
	(12.8)	(26.2)	(57.0)	(4.0)	(100.0)
1990-91	7,509	15,369	33,437	2,346	58,661
	(12.8)	(26.2)	(57.0)	(4.0)	(100.0)

APPENDIX-XI

Number and Distribution of Teaching Staff in the Affiliated Colleges According to Designation (1986-87 to 1990-91)

Year	Senior teachers*	Lecturers**	Tutors/Demo-nstrators	Total
1986-87	25,104	1,49,888	8,246	1,83,238
	(13.7)	(81.8)	(4.5)	(100.0)
1987-88	26,055	1,54,257	8,496	1,88,808
	(13.8)	(81.7)	(4.5)	(100.0)
1988-89	27,367	1,58,187	8,541	1,94,095
	(14.1)	(81.5)	(4.4)	(100.0)
1989-90	27,708	1,62,856	8,771	1,99,335
	(13.9)	(81.7)	(4.4)	(100.0)
1990-91	28,421	1,67,047	8,996	2,04,464
	(13.9)	(81.7)	(4.4)	(100.0)

Note : Figures in parentheses indicate the percentages of the cadres to the total staff in the corresponding year.

** Comprising Principals, Professors, Readers and Senior Lecturers.

* Including Assistant Professors and Assistant Lecturers.

APPENDIX-XII

Number of Doctorate Degrees awarded : Faculty-wise (1985-86 to 1989-90)

Faculty	1985-86	1986-87	1987-88	1988-89	1989-90
Arts	2,886	2,858	3,114	3,242	3,375
Science	2,838	2,814	3,038	3,074	3,110
Commerce	263	249	248	330	383
Education	219	215	245	247	249
Engineering/ Technology	194	224	225	229	233
Medicine	61	68	82	86	90
Agriculture	627	583	712	758	807
Veterinary Science	155	101	120	126	132
Law	34	36	35	39	44
Others	69	71	79	88	98
Total	7,346	7,219	7,934	8,219	8,521

* Provisional

APPENDIX - XIII

Programmes Received From Media Centres During April 1990 To March 1991 (Subject-Wise Breakup)

S.No.	Subect Category	No.	Percentage
1.	Applied Sciences	122	26.2
2.	Pure Sciences	113	24.3
3.	The Arts	70	15.0
4.	Social Sciences	59	12.7
5.	Language & Literature	35	7.5
6.	History & Geography	15	3.2
7.	Philosophy & Psychology	14	3.0
8.	General	38	8.1
	Total	466	

APPENDIX-XIV
UGC Countrywide Classroom Telecast During April 1990 To March 1991

Programme Source	No.	%	Duration	%
Media Centres	618	81.10	12075 min. (201 hr.)	81.36
Other Indian	28	3.68	630 min. (10 hr.)	2.24
Foreign	116	15.22	2137 min. (36 hr.)	14.40
Total	762		14842 min. (247 hr.)	

Total number of days of telecast (Data from 12 noon- 1 pm (1.4.90 to 9.9.90) or 1 pm - 2 pm (10.9.90 to 31.3.91) telecast	:	278
Total number of days UGC Countrywide Classroom telecast (12 noon/1 pm) cancelled due to sports events etc.	:	17

APPENDIX-XV
Details of Departments supported under COSIST

S. No.	Name of the Department/ University	Year of Support	PG Education and Research (Thurst Area)	Major Equipment provided
1	2	3	4	5
			PHYSICS	
1.	Department of Radio Physics & Electronics, Calcutta University.	1983-84	Solid state and Electronic devices, Micro-electronics techniques, Fabrication of Impantdiodes including establishment of a mm wave laboratory and photovoltaic devices.	Semiconductor characterisation unit for concentration, impurity profile, lifetime etc. measurement. Plasma and dry etching equipment, Environmental control equipment, Cryotemperature generator.
2.	Department of Physics, Punjab University.	1983-84	Experimental Nuclear Physics	Multiuser data analysis system with 4 ADCS, Helium leak detector, Systems for characterisation and study of electrical/optical properties of materials and devices, Opto-acoustic spectrometer.
3.	Department of Physics, University of Poona, Pune.	1983-84	PG Education only	Geir-Dunkle integrating sphere-spectrophotometer (range 0.32-2.5 μ), Magnetic susceptibility measuring set up, Photoacoustic spectrometer, 'Neuromatic' 2-Channel neuromyograph.
4.	Department of Physics, Indian Institute of Science, Bangalore.	1983-84	Crystal growth and material preparation	Programmed temperature controlled furnace, Accessories for crystal pulling unit (RF Heater, pulling mechanism, environment control, temperature control), Liquid helium liquifier, Cryogenic measuring facilities.
5.	Department of Physics, Banaras Hindu University.	1984-85	Physics of materials with particular refrence to synthesis, crystal growth and characterisation of crystals, lasers and molecular photo-physics.	Electron microscope TEM with STEM, EBIC, EDAX & ELS attachment; DTA/TGA/DSC facility, Mask processor, Mask aligner vacum chucks, scribers and ultrasonic bonders, Universal Czochralski crystal puller, Nd/YAG Laser pumper, Dye laser with facilities for pressure tunning and polarization control.
6.	School of Physics, University of Madras.	1984-85	Nuclear and theoretical physics.	X-ray diffractometer 1730/10 alongwith microprocessor, High purity germanium detectors, Multichannel analyser with two point digital spectrum stabilizer, Mossbaver spectrometer with large velocity.
7.	Department of Physics, Roorkee University.	1985-86	Solid state physics (theoretical and experimental), Physics of Molecular Collision.	Computer peripheral devices, Simultaneous thermal analysis system for PG/DTA.
8.	School of Physics Andhra University	1987-88	Physics of materials and space physics	Fabry-Perot Interferometer, VHF Doppler sounder, Transportable digital ionosonde-IPS-42.

APPENDIX-XV (Contd.)

S. No.	Name of the Department/ University	Year of Support	PG Education and Research (Thurst Area)	Major Equipment provided
1	2	3	4	5
9.	Department of Physics Aligarh Muslim University	1987-88	Theoretical Physics interacting with experimental Nuclear Physics and high energy. Physics. Laser Spectroscopy and study of materials.	FTIR, EPR Unit, Compton suppressed Gamma ray spectrometer.
10.	Department of Physics University of Delhi	1987-88	Theoretical Physics	Experiments Rutherford Scattering, X-ray Flourescence, Electro-optics, Characterisation of surface acoustic wave devices, moving-film X-ray diffractometer.
11.	Department of Physics University of Allahabad	1987-88	Solid State & Molecular Physics.	Microvax II* add ons, Multichannel analyser with accessories, Microwave Net work analyser, Thermal analysis system, RF impendence analyser.
12.	School of Physics University of Hyderabad	1987-88	Theoretical Physics, Physics of Materials with particular reference to disordered materials High TC Super conductors.	NMR magnetometer, Microvax II, Liquid nitrogen plant, Liquid helium plant.
13.	Department of Physics, Jadavpur University	1987-88	Physics of the condensed matter, High energy and theoretical physics.	Semiautomatic scanning and measurement system for Nuclear track, Bubble chamber scanner tape drive.
14.	Department of Physics, Rajsthan University, Jaipur	1988-89	High JC and High Energy particle plugs.	XPS, AES and EDX, TG, DTG, DTA, DSC, with recorder.
15.	Department of Physics, Osmania University, Hyderabad	1988-89	Condensed matter physics	Liquid Nitrogen plant PC and mini Computer, Laser facilities, Logic analyser.
			CHEMISTRY	
16.	Department of Chemistry, Punjab University	1983-84	Organic and Physical Chemisty	G.L.C, Fischer spinning band columns, Inverted chromatography, Chromatotron Molecular stills, Photocorrelation spectrometer, HPLC.
17.	Solid State and Structural Chemistry, Indian Instt. of Science, Bangalore.	1983-84	Solid state and Structural Chemistry	IR spectrometer, Raman spectrometer, Closed circuit helium cryostat
18.	Department of Chemistry, University of Delhi	1984-85	Synthesis & Structural Organic Chemistry with particular reference to biologically active compounds, peptides etc., Physical Chemistry with particular reference to studies of miceles and instrumentation.	Computer system, HPLC, Polarograph, Programmable thermostat.
19.	Department of Chemistry, University of Hyderabad	1984-85	Orgaic Synthesis	
20.	Department of Chemistry, Jodhpur University.	1984-85	Phytochemistry of arid zone plants, soil Chemistry and Physical Chemistry.	Stop flow spectrometer, C,H,N analyser, HPLC, Mini computer.

APPENDIX-XV (Contd.)

S. No.	Name of the Department/ University	Year of Support	PG Education and Research (Thurst Area)	Major Equipment provided
1	2	3	4	5
21.	School of Chemistry, University of Madras.	1984-85	Inorganic Chemistry	Nd-YAG laser, ESR spectrometer with photo-chem accessories, Stop flow acc., Corrected spectra accessories for Spectrofluorimeter.
22.	Department of Chemistry, University of Poona.	1984-85	Radiation and Nuclear Chemistry	Liquid scientillation counter, Multi-channel analyser, Ga-Li and Si-Li detector, Gamma source.
23.	Department of Chemistry, Rajasthan University.	1984-85	Organometallic Chemistry and or ganofluorine Chemistry.	X ray diffraction unit.
24.	Department of Organic Chemistry, Indian Instt. of Science, Bangalore.	1984-85	Organic Chemistry.	High resolution mass spectrometer with G
25.	Department of Chemistry, North-Eastern Hill University.	1986-87	Physical & Organic Chemistry.	Proton NMR spectrometer, Gas Chromatograph, Closed helium cryocooler attachement for ESR-Spectrometer, Electro Chemical Instrument (Cyclic Voltmeter), Liquid nitrogen cryostat.
26.	School of Chemistry, Andhra University.	1987-88	Marine Natural Product	FT-NMR with multiprobe, GLC Tracer with FID, Automatic C,H,N, analyser
27.	Department of Chemistry Jadavpur University	1987-88	Analytical Chemistry	NMR, AAS, Ion Chromatograph, Spectrofluorimeter, HPLC, Solution Calorimeter.
28.	Department of Chemistry, Guru Nanak Dev University	1987-88	Organic Chemistry	High resolution multi nuclear 90 MHz FT-NMR, Mass spectrometer, Polarographic analyser, Densitometer, vis. Spectrophotometer.
29.	Department of Chemistry Gorakhpur University	1987-88	Physical & Inorganic Chemistry	NMR 60 MHz,IR Spectrophotometer, Element Analyser, Photirradiation & Corrosion measurement System.
30.	Department of Chemistry, Banaras Hindu University	1987-88	Structural Chemistry	Mass Spectrometer, Peripherial mini Computer with suitable software, I.R. Electrochemistry ststem.
31.	Department of Physical and Inorganic Chemistry University of Bangalore.	1988-89	Physical and Inorganic Chemistry.	Multi Nuclear NMR, CHN analyzer.
			LIFE SCIENCES & BIO-SCIENCES	
32.	Department of Bio-Chemistry, Instt. of Med. Scs. Banaras Hindu University.	1983-84	Molecular Biology & Genetic Engineering	Drive unit for ultracentrifuge, HPLC, Circular dichromic spectrophotmeter, GLC Large fermentor.
33.	Department of Botany, Calcutta University.	1983-84	Cell Biology, Chromosome Research	Liquid scintillation counter, HPLC, Gilson analyser, Lyophilser, CO_2 incubator and specialised electrophoresis unit, Gas chromatograph equipped with flameionisation and nitrogen detector unit.

APPENDIX-XV (Contd.)

S. No.	Name of the Department/ University	Year of Support	PG Education and Research (Thurst Area)	Major Equipment provided
1	2	3	4	5
34.	School of Life Sciences, Jawaharlal Nehru University.	1983-84	Radiation Biology, Tissue culture and Molecular Biology including Genetic Engineering.	GLC, Refrigerated centrifuge, ESR spectrophotometer, HPLC.
35.	School of Bio-Sciences, Madurai Kamraj University.	1983-84	Molecular Genetics, Immunology, Plant pathology and plant physiology.	Ultracentrifuge, Liquid scientillation counter.
36.	Department of Micro biology, M.S. University of Baroda.	1983-84	Industrial Microbiology and Microbial Genetics.	HPLC, Electron microscope, Lyophilizer, Scintillation counter.
37.	PG School of Biological Studies, Ahmednagar College (Poona Univ.)	1983-84	Evolutionary Genetics.	NMR spectrometer, Refrigerated high speed centrifuge with rotors. UV Spectrophotometer with special attachement for study of DNA melting profiles & DNA reassociation. Radioimmunoassay & Fraction plot accessories for the liquid scintillation counter.
38.	Department of Biochemistry Osmania University.	1984-85	Chemistry & Biochemistry of amonio peptides and proteins, metal toxicity and fungal metabolism.	UV-VIS recording spectrophotometer, Processor controlled liquid scintillation system, AAS Orion ion analyser & electrodes for F, NH^2 NO_3 CA etc., HPLC 3 Temary gradient model LC-4A.
39.	Entomology Research Institute, Loyola College, Madras University, Madras.	1984-85	Host specificity in relation to insect-plant interaction.	HPLC, Refrigerated centrifuge, UV spectrometer, Mini bomb calorimeter.
40.	Department of Micro biology & Cell Biology Indian Instt. of Science, Bangalore.	1984-85	Gene structure, Organisation and functions in micro-organism and Eukaryotes, microbial metabolism & applied Microbiology Immunolgy of pathogenic organism, Tyneruimmunology immunodiagonistic technology.	Electron microscope model EM-109 R with ultra microtome, Fast protien liquid chromomatography system, fermenter, UV-Spectrophotometer, UV transilluminator with camera, high voltage electrophoresis system.
41.	Department of Biochemistry, Indian Instt. of Science, Bangalore.	1984-85	Lipids and Biomembranes, molecular Endocrinology, Neurochemistry and Bio-energetics.	High speed centrifuge, Liquid scintillation counter, Ultra centrifuge with rotors, spectro fluorimeter, HPLC.
42.	Department of Zoology, Calcutta University.	1985-86	Genetics and Vertebrate Endocrinology.	Image analyser, HPLC.
43.	Department of Zoology, Delhi University.	1985-86	Cell and developmental Biology, reproductive Endocrinology, Physiology and Taxicology.	Flow cytometer, HPLC, Tissue culture, Hybridoma facility, GLC, Liquid scientillation counter.
44.	Department of Zoology, Banararas Hindu University, Varanasi.	1985-86	Reproductive Physiology & Endocrinolgoy, Biochemistry and Cytogenetics.	Liquid scintillation counter, Gamma counter, Ultra centrifuge, Plasma-2000 spectrometer, UV spectrophotometer, X-ray machine, High speed refrigerated centrifuge.
45.	Department of Botany, Delhi University.	1985-86	Biology of reproduction plant physiology, Molecular Biology	Growth chambers, Liquid scientillation counter, Densitometer, Polarizing microscope.

APPENDIX-XV (Contd.)

S. No.	Name of the Department/ University	Year of Support	PG Education and Research (Thurst Area)	Major Equipment provided
1	2	3	4	5
46.	Department of Botany, Banaras Hindu University.	1985-86	Algology and Ecology	Amino-acid analyser, GLC, C,N, H-analyser, High-voltage Electrophoresis.
47.	School of Marine Sciences, Cochin University.	1985-86	Costal and Esturine, Oceanography and Coastal water and mud banks.	Electron microscope, Liquid scintillation counter, scintillation balance, Differential thermal analyser, X-ray diffraction analyser C,N,H analyser, Proton precision magnetometer.
48.	Molecular Bio-physics Unit, Indian Instt. of Science, Bangalore.	1985-86	Bio-Molecular structure and interaction.	Rotating anode, X-ray generator, Micro processor controlled light resolution CD spectrometer, Protein sequenator, Liquid scintillation counter.
49.	Department of Bio-Chemistry, M.S. University	1986-87	Nutrition and Nutritional Bio-Chemistry. Neurochemistry.	Spectrophotometer, Refrigerated & Ultracentrifuges, Liquid scintillation counter.
50.	Department of Bio-Chemistry, Lucknow University.	1987-88	Plant Bio-chemistry and Enzymology	Spectrophotometer,, Super speed refrigerated centrifuge, Ultroscan laser densitometer, Total chromatographic system..
51.	Department of Bio-Chemistry, Calcutta University.	1987-88	Nutrition Bio-chemistry and Microbiology, Physiology	Ultracentrifuge, Refrigerated centrifuge, HPLC, Liquid scintillation counter, Gamma counter with minigama & RIA.
52.	Depattment of Botany Patna Univcrsity	1987-88	Mycology, Pathology & Algae.	TEM, High speed centrifuge, UV/VIS spectrophotometer-cum-scanner, DNA sequencing unit, Fermentation vessel with controls.
53.	Department of Botany Bhagalpur University	1987-88	Mycotoxicology, & Environmental Biology.	Lyophilyzer, Midget electrophoresis with laser densitometer, HPLC, Flow injection analysis system.
54.	C.A.S. in Botany University of Madras	1987-88	Mycology, Plant Pathology and Algae.	UV-VIS spectroflurimeter, Ultratome, Liquid scientillation system, Dissolved oxygen monitor, Ultrasonic disintegrator.
55.	Department of Marine Biology, Annamalai University	1987-88	Marine Microbiology & Toxicology.	HPLC, Microbial identification system, Plasma spectrophotometer, High speed refrigerated centrifuge.
56.	Department of Zoology Poona University	1987-88	Only postgraduate teaching	Electron microscope with other accessories and photographic unit.
57.	Department of Zoology Gujarat University	1987-88	Cell & Radiation Biology	Chromosome work station for automatic funding, counting, karyotyping, Binocular microscope, Interactive image analyser, MCP control unit for scanning.
			EARTH-SCIENCES	
58.	Department of Geology, Presidency College, Calcutta.	1984-85	Study of Crustal evolution and metalogenesis in some precambrian sheild.	ICPL, Thermal ionisation mass spectrometer.

APPENDIX-XV (Contd.)

S. No.	Name of the Department/ University	Year of Support	PG Education and Research (Thurst Area)	Major Equipment provided
1	2	3	4	5
59.	Department of Geology, Gauhati University.	1984-85	Petrology (Sedimentary, metamorphic, Igenous and coal)	AAS with tubes, Flame photometer, Image analyser with photomicroscope projection attachment.
60.	Department of Geology, Kumaon University.	1984-85	Geophydrological, geomorphological and environmental investigation of the Gaula river in the outer lesser Himalaya, Natural resources and environmental degradation, Assessment through remote sensing of the outer range of lesser Himalaya	DTA/DTG, Additive Colour viewer, Transfexscope (APT-1 type)
61.	Department of Geology, MS University of Baroda.	1984-85	Ouatemary Geology	AAS, EDX qualitative and quantitative analyser (attachement to the SEM), LKB liquid scintillation counters (for C_{14} & H_3), Digital type resistivity meter, Portable drilling unit for sample collection.
62.	Department of Earth Scs. University of Roorkee.	1984-85	Engg. Geophysics, Engg. Geophydrology, Engg. Geology.	Mobile laboratory, ICPL, Spectral data analyser.
63.	Department of Geophysics, Osmania University.	1985-86	Exploration Geophysics.	Pulse EM system, Multi sensor will logging unit (Truck mounted with sensor).
64.	Department of Geology Jadavpur University	1984-85	Economics Geology, Petrology, Mineralogy and Geo-Chemistry.	ICP unit, DTA/TGA.
65.	Department of Geology Punjab University	1986-87	Exploration Geology and Geo-Chemistry, Himalayan Geology	Stereoscopic of inocular microscopes, ICPS, Mass spectrometer.
66.	Department of Geology, University of Mysore.	1987-88	Paleontology & Geochemistry of Precambrian rocks.	Microscopes, Electron probe microanalyser with attachment, Chiller, UPS, Logitech. (a)
67.	Depatment of Geology, Banaras Hindu University	1987-88	Micro-paleontology Stratigraphy	SEM* with accessories
68.	Department of Applied Geology, Indian School of Mines, Dhanabad.	1987-88 Exploration	Structural Geology & Mineral Exploration	XRD with Texture Gonimeter, ICP sequential spectrometer, Logitech section cutting & polishing machine, Rock strength testing machine.
			MATHEMATICS	
69.	Depatment of Maths, Punjab University.	1984-85	Number theory, Algebra, analysis (Pure Maths, deptt), Magneto hydrodynamics (Applied Maths Deptt.)	—
70.	Department of Mathematics, Ramanujan Instt., Madras University	1985-86	Analysis, Algebra, Geometry, Topology.	—
71.	Department of Mathematics. University of Delhi	1987-88	—	—
72.	Department of Statistics Poona University	1987-88	—	—

APPENDIX-XV (Contd.)

S. No.	Name of the Department/ University	Year of Support	PG Education and Research (Thurst Area)	Major Equipment provided
1	2	3	4	5
73.	Department of Maths, & Statistics, University of Allahabad	1987-88	—	—
			ENGINEERING/TECHNOLOGY	
74.	Department of Civil Engg. University of Roorkee.	1985-86	Transportation Engg., Enviornmental Engg., Remote Sensing and Photogrammetric Engg.,	Temperature and humidity control system for transportation laboratory, Multipurpose mobile laboratory, Terrestrial plotter with digital read-out, Zoom transferoscope.
75.	Department of Civil Engg., Indian Instt. of Science, Bangalore.	1985-86	Hydromechanics and water resources.	Tri-axial and consolidation testing facility, differential thermal analyser and surface area measuring device, Laser Doppler anemometer, Dynometer turbine. Calcorup plotter.
76.	Department of Chemical Engineering, Anna University.	1984-85	Process Development Transport processes, Crystal Growth	GC, AAS, HPLC, Modular crystal growth unit, Rotary drier complete with drive, tilting arrangement, electrically heated and with blower.
77.	Deptt. of Chemical Tech. Division of Chemical Engg., University of Bombay.	1984-85	Multiphase reaction, Multiphase reactors, Separation processes.	Fourier transform infrared, Liquid nitrogen plant, Core facilities for membrane processes, Laser-Doppler anemometer.
78.	Department of Electrical Engineering, Indian Instt. of Science, Bangalore.	1984-85	Power Electronics & Drives, Remote sensing Singal & image processing.	Minicomputer system, Logic Analyser, Current transducers, Torque and Speed transducers, High resolution VCR with colour camera and colour monitor, On-board power supply for the VCR and camera, RGB video digitizer, Exansion of the image processing system.
79.	Department of Electrical Engineering, Roorkee Univ.	1985-86	Measurement and instrumentation with an emphasis on industrial instrumentation and power systems, process instrumentation.	Multiuser micrporcessor development system, General purpose data acquisition system, computer with perriferial attachment power system stimulator with relays.
80.	Department of Electronics Engineering, Instt. of Technology, Banaras Hindu University.	1984-85	Microwave Engineering, Communication system Engineering.	Signal generator built-in doubler, Automatic scalar network analyser, Ultra high vacum system, Suction pump and turbomolecular pump having a mass analyser and ovening facility, Hydrogen plant with molecular gas purifier, Contractless resistvity measurement equipment.
81.	Deptt. of Electrical Communication Engineering, Indian Instt. of Science, Bangalore.	1984-85	Computer-software, hardware and optical communication, digital circuits.	32-bit minicomputer, Lasers and accessories Fibre-optic test-set-up, Programmable digital test and measuring instruments.
82.	Deptt. of Electronics Engineering, Roorkee University.	1985-86	Communication systems and control and guidance (with an emphasis on pictures and speech processing and digital control)	Spectrum analyser, Digital picture storage system with camera and monitor, 16-bit microprocessor development system, Digital network, analyser.

APPENDIX-XV (Contd.)

S. No.	Name of the Department/ University	Year of Support	PG Education and Research (Thurst Area)	Major Equipment provided
1	2	3	4	5
83.	Deptt. of Mech. & Ind. Engg., Roorkee University.	1985-86	CAD/CAM, welding engineering, Refrigeration and air-conditioning.	CNC/Milling Machine, CAD/CAM facility, 2-D/3-D drafting system, solid & surface, modelling & manufacturing, 6-axis Robot, Drafting plotter.
84.	Department of Production Engineering, Jadavpur University.	1985-86	Manufacturing systems, Automation and robotics.	CNC-II, Vision system, Auto-Inspect System, Censors and Actuators.
85.	Department of Metallurgy, Indian Instt. of Science, Bangalore.	1985-86	Mineral processing, Hydro-metallurgy pyro-metallurgy, computer modelling, metallic glasses.	Impact tester, X-ray diffractometer, Lathe & shaping machine, Electro-Chemical measurement console, UV-visible Spectometer, High-temperature impendance spectrometer, Gas analysis chromatograph, Analytical scanning electron microscope.
86.	Department of Metallurgical Engineering, Banaras Hindu University.	1985-86	Rapid solidification and metallic glasses, Deformation and fracture, phase stability and phase tranformation process metallurgy.	Surface area analyser, Instron testing machine, Dilatometer, Quantitative image analyser, High-speed movie camera, Lathe and milling machine.
87.	Department of Earthquake Engineering, Roorkee University	1984-85	Structural Dynamics, Soil and Rock Dynamics Engineering, Seismology & Seinotectonics.	15T overhead cross with supporting system, High speed and high resolution data acquisition and processing system dedicated to dynamic testing set up including airconditioned housing, Shake table platform with foundations and platforms for model fabrication, Motor set up for controlled power supply for vibration testing/processing of data.
88.	Department of Mining Engg. Indian School of Mines, Dhanbad.	1986-87	Rock mechanics and ground control, Mining systems and techniques, Mine environment.	Ventilation with word leonard set for speed control, Remote monitor for slacks and fire aross, Accoustics emission equipment for rock noise and failure, Modern rock blasting facility with high speed camera, Portable coring rig.
89.	Department of Mining Engg., Instt. of Technology, Banaras Hindu University.	1986-87	Mine planning and design, Exploration and Exploitation.	I.C.D. emission spectrometer, Particle size analyser and sinslin-II, Airbom dust measruinmg unit.
90.	Department of Electrical Engg. Jadavpur University.	1986-87	Power system control, measurment and instrumentation.	Super micro-computer with multiterminal facilities, Real time data-acquisition and local area networking facility, Multichannel Programmable polygraph, image processing systems, Minicomputer.
91.	Centre for Water Resource Anna University.	1987-88	Ground Water Resources and Water Resources Management	Bore hole deep water camera with VCR and accessories, Scaler water quality analyser, AAS, SAS Terrameter Loggerunit and VES soft-vare, Exploration rig, Drag balance and Signal conditioner cum balancing unit, Electronic distance meter.

APPENDIX-XV (Contd.)

S. No.	Name of the Department/ University	Year of Support	PG Education and Research (Thurst Area)	Major Equipment provided
1	2	3	4	5
92.	Civil Engineering Department, Jadavpur University	1987-88	Structural Engineering & Water Resources Management	H & V Shake Tables, Electronic Triaxial, Wind Tunnel with measuring equipment/instruments with microcomputer.
93.	Chemical Engineering Department, Indian Institute of Science.	1987-88	Multiphase phenomenon	Computer system Video System, Haake Viscometer, HPLC, Pressure reactor, Laser holograph, Minimax polymer evaluation system.
94.	Electronics and Communication Department, Cochin University of Science and Technology	1987-88	Microprocessor application & Microwave Antennas	Image Scanner, CAD System (PCB design system), LAN System, RF network analyser Polar display with aumillary power supply Broad band microwave units, Microwave frequency counter.
95.	Pharmaceutical Sciences Department Punjab University	1987-88	Pharmaceutical Chemistry and Pharacology.	HPLC, NMR, IR, UV-Double Beam Spectrophotmeter, Precision Polarimeter, Computerised animal activity monitor with accessories, Electromagnetic blood flow meter
96.	Metallurgical Engineering Department Roorkee University	1987-88	Metal casting Technology	Vacuum induction melting Unit: Capacity 5 kg. Vaccum 10-5 Torr., Dissolved gas analyser (O,N,H), Water testing facility, Corrosion meter, chamber and potentiostat.
97.	Department of Aerospace I.I.Sc. Bangalore.	1988-89	Aerodynamic	Aerodynamic.
98.	Institute of Medical Science	1988-89	Medical Science Cancer Research	Teaching, Training, Treatment.

APPENDIX - XV (Contd.)
COSIST Departments Supported during 1989-90

S.No.	Name of Department/University	PG Education and Research (Thrust Area)	Major Equipment Provided
CHEMISTRY AND SCIENCE			
1.	Deptt. of Geology Mohanlal Sukhadia Univ., Udaipur	Tectonics and Geo Chemistry	Image Analyser with microscope projection attachment, Automatic thinning and polishing section machine. Table top Scanning electron microscope & Grinders
2.	Deptt. of Chemistry, Osmania Univ., Hyderabad	Bioactive Natural Products, heterocyclics, Kinetics of electron transfer reactions and Bio-coordination Chem.	90 MHZ NMR; Flash photolysis equipment UV/Vis/IR Spectrophotometer with n=microprocessor, PC/AT
MATHEMATICS			
1.	Department of Mathematics Bombay University	Probability, Analysis & Combinatrics	2 PC/AT with terminals
2.	Department of Mathematics Sambalpur University	Analysis & Relativity	CPU with 4 mB RAM & peripherals. Xerox Machine
3.	Department of Mathematics Andhra University.	Analysis and Number Theory	PCs-3, Xerox/Electronbic typing machines
4.	Department of Mathematics Jodhpur University	Special Functions, MHD Fluid Dynamics	CPU with 4 mB RAM & peripherals. Xerox Machine
STATISTICS			
1.	Department of Statistics Panjab University	Probability, Statistical Inferences Multivariate Analysis	Computer Processing Unit with 4 mB RAM and other accessories including soft ware
2.	Department of Statistics Calcutta University	Probability, Statistical Inference, Operational Research & Quality Control, Multivariate Analysis	CPU with 4 mB RAM and other accessories. Xerox Machine
3.	Department of Statistics Karnataka University	Stastical Inference, Inference in Stochastic Procsses, Population Studies	CPU with 4 mB RAM and other accessories
BOTANY			
1.	Deparment of Botany Allahabad University	Palaeo Botany-Morphology Microbiology-Mycology Plant Pathology, Plant Physiology	Vehicle, Stereo microscope., Stereobinocular Microscopes, Cold room assembly, Glass house with temp. humidity control equipment, Centrifuge, Climatizar, Amino acid analyser. Automatic Freezing microtome
2.	Department of Botany Lucknow University	Plant Physiology, Plant Genetics; and Plant Virology	UV-VIS Spectrophotometer Portable Spectroradiometer, Ultracentrefuge, Gamma Counter, Inverte phase contrast microscope Research photomicroscope, Electrophoresis equipment, HPLC Preparatory Ultracentrifuge, Plant Growth chamber, FPLC equipment, CO_2 Incubators
3.	Department of Genetics Osmania University	Plant Genetics and Tissue Culture	

APPENDIX - XV (Contd.)
COSIST Departments Supported during 1990-91

S.No.	Name of Department/University	PG Education and Research (Thrust Area)	Major Equipment Provided
BOTANY			
14	Department of Plant Molecular Botony, South Campus, Delhi University	Plant Molecular Botony	Ultracentrifuge, High speed Refrigerated Centrifuge, Growth Chamber

APPENDIX - XVI

List of Subjects:- UGC test for JRF and eligibility for Lectureship held on 20th January, 1991

Sl. No.	Name of the Subject	Code No.
1.	Economics including	01
	Rural Economics	01A
	Co-operation	10B
	Demography	10C
	Development Planning/Development Studies	10D
	Econometrics	10E
	Applied Economics	10F
	Development Economics	10G
	Business Economics	01H
2.	Political Science	02
3.	Philosophy including	03
	South Indian Philosophy/Study	03A
4.	Psychology	04
5.	Sociology including	05
	Rural Sociology	05A
	Rural Services	05B
	Social Dynamics	05C
6.	History	06
7.	Anthropology	07
8.	Commerce including	08
	Accountancy & Business Statistics	08A
9.	Education	09
10.	Social Work	10
11	International Relation/International Studies including Defence/Strategic Studies	11
12.	Home Science	12
13.	Rural Development	13
14.	Public Administration	14
15.	Population Studies	15
16.	Music (including Hindustani, Karnatic Vocal & Instrumental Hindustani, Percussion, Musiciology, & Rabindra Sangit)	16
17.	Management (including Business Admn. Managt./Marketing/Marketing Managt./ Industrial Relations & Personnel Managt./Financial Management/ Co-Operative Management)	17
18.	Maithili	18
19.	Bengali	19
20.	Hindi	20
21.	Kannanda	21
22.	Malayalam	22
23.	Oriya	23
24.	Panjabi	24
25.	Sanskrit	25
26.	Tamil	26
27.	Telugu	27
28.	Urdu	28
29.	Arabic	29
30.	English	30
31.	Linguistics	31
32.	Chinese	32
33.	Dogri	33
34.	Nepali	34
35.	Manipuri	35
36.	Assamese	36
37.	Gujarati	37

APPENDIX - XVI (Contd.)

Sl. No.	Name of the Subject	Code No.
38.	Marathi	38
39.	French	39
40.	Spanish	40
41.	Russian	41
42.	Persian	42
43.	Rajasthani	43
44.	German	44
45.	Japanese	45
46.	Adult Education/Continuing Education/Andragogy/Non-formal Education	46
47.	Physical Education	47
48.	Work Education	48
49.	Arab Culture	49
50.	Indian Culture	50
51.	Islamic Studies	51
52.	West Asian Studies	52
53.	Southeast Asian Studies	53
54.	African Studies	54
55.	Labour Welfare & Industrial Relations/Labour & Social Welfare/ Human Resource Management	55
56.	South Asian Studies	56
57.	Soviet Studies	57
58.	Law	58
59.	Library & Information Science	59
60.	Gandhian Thought/Peace Studies	60
61.	Buddjst Studies	61
62.	Religious Studies/Theology	62
63.	Mass Communication & Journalism	63
64.	Communicative English	64
65.	Performing Art	65
	Dance	65A
	Drama/Theatre	65B
66.	Museology	66
67.	Archaeology	67
68.	Criminology	68
69.	Tamil & Indian Literature	69
70.	Tribal & Regional Language/Lit.	70
71.	Folk Literature	71
72.	Comparative Literature	72
73.	Jyotisa	73A
	Sidhanta Jyotisa	73B
	Navya Vyakarna	73C
	Vyakarna	73D
	Mimansa	73E
	Navya Nyaya	73F
	Sankhya Yoga	73G
	Tulanatmaka Darsana	73H
	Sukla Yajurveda	73I
	Madhva Vedanta	73J
	Dharmasastra	73K
	Sahitya	73L
	Purana Itihasa	73M
	Agama	73N
74.	Women Studies	74
75.	Urban & Regional Planning	75

APPENDIX - XVI (Contd.)

Sl. No.	Name of the Subject	Code No.
76.	Resource Delopment	76
77.	Speech & Hearing	77
78.	Prakrit & Jainology (Including Ardhamagadhi)	78
79.	Visual Art	79
	Drawing & Painting	79A
	Fine Art	79B
	History of Art	79C
80.	Human Geography	80
81.	Social Medicine & Community Health	81
82.	Forensic Science	82
83.	Pali	83
84.	Kashmiri	84
85.	Konkani	85

APPENDIX-XVII

List of subjects: - Joint CSIR-UGC test for Junior Research Fellowship held on 30th June, 1990.

Sl. No.	Name of the Subject area	Code No.
1.	Chemical Sciences	01
2.	Earth, Atmospheric, Ocean & Planetary Sciences	02
3.	Life Sciences	03
4.	Mathematical Sciences	
	(a) Mathematics	04
	(b) Statistics	05
5.	Physical Sciences	06

APPENDIX-XVIII

List of subjects: - Joint CSIR-UGC test for Junior Research and eligibility for Lectureship held on 30th December, 1990.

Sl. No.	Name of the Subject area	Code No.
1.	Chemical Sciences	01
2.	Earth, Atmospheric, Ocean & Planetary Sciences	02
3.	Engineering Sciences	03
4.	Life Sciences	04
5.	Mathematical Sciences	
	(a) Mathematics	05
	(b) Statistics	06
6.	Physical Sciences	07

APPENDIX-XIX

LIST OF CENTRES OF ADVANCED STUDY IN HUMANITIES AND SOCIAL SCIENCES AS ON 31-3-1991

Sl. No.	Subject	University/Institution	Thrust area (s)
1.	Economics	Bombay	Public Finance & Industrial Economics
2.	Economics	Delhi	Economics of development & Economic History
3.	Economics	Gokhale Institute, Pune	Agricultural Economics
4.	Linguistics	Annamalai	Dravidian Linguistics
5.	History	Aligarh Muslim	Medival Indian History
6.	Sanskrit	Poona y	Sanskrit Literature
7.	Philosophy	Madras	Advaita & Allied System of Philosophy
8.	Education	M.S. Univ. of Baroda	Education Research
9.	Psychology	Utkal	Educational Psychology and Social Psychology
10.	Psychology	Allahabad	1) Applied and experimental and Social Psychology
11.	Sociology	Delhi	Sociology
12.	Archaeology	Deccan College, Pune	Indian Arehaeology
13.	Philosophy	Jadavpur	1) Theory of knowledge and reality-Indian & Western 2) Logic & language-Indian & Western 3) Ethics, Religion, Social and Political Philosophy-Indian & Western 4) Philosophy of mind
14.	Anthropology	Ranchi	1) Advanced Anthropological Theory & Methodology 2) Macro-analysis, qualification methods and system analysis
15.	Linguistics	Osmania	1) Historical and Comparative method (Indo-Aryan and Dravidian) 2) Phonetics (linguistics and experimental) 3) Contact and convergence study with special reference to Munda, Dravidian and Indo-Aryan Language in Central India 4) Socio-Linguistics and Applied Socio-linguistics w.s.r.t. language teaching, literacy & translation 5) Psycho linguistics
16.	Gujarati	S.N.D.T. Women's	Modern Gujarati Literature

APPENDIX - XX

LIST OF DEPARTMENTS OF SPECIAL ASSISTANCE IN HUMANITIES AND SOCIAL SCIENCES AS ON 31-03-1991

Sl. No.	Subject	University/Institution	Thrust area (s)
1.	Commerce	Aligarh Muslim	1) Enterpreneurial Studies in backward regions a weaker Sections
			2) Energy & Water Management
2.	Commerce	Andhra	Investigation of the problems of local industries i
3.	Commerce	Allahabad	1) Finance & Accounting
			2) Public enterprise Management
			3) Marketing
4.	Commerce	Banaras Hindu	Corporate studies, Banking, Insurance & Finance
5.	Commerce	Calcutta	1) Accounting and Finance
			2) Economic Environment & Human resources development
6.	Commerce	Delhi	1) Accounting & Finance
			2) International Business
			3|Organisation behaviour human relations
7.	Commerce	Gauhati	1) Rural development
			2) Accounting & Finance
8.	Commerce	Rajasthan	1) Accounting & Business date processing
			2) Rural Management
			3) Banking & Institutional Finance
9.	Economics	Andhra	1) Agricultural economics and cooperation
			2) Regional and Urban economics
			3) Public economics
10.	Economics	Calcutta	Urban Economics
11.	Economics	Jadavpur	1) Regional evonomics studies with special emha
			a) Trade and Industry
			b) Transport energy
12.	Economics	M.S. Univ. of Baroda	1) Economics of education and human resources
			2) Growth processes of Indian economy
13.	Economics	Marathwada	1) Regional development
			2) Agricultural Economics
			3) International Economics
14.	Economics	Presidency College, Calcutta	Indian Economy
15.	Economics	Punjabi	1) Regional economics
			2) Economics of Socialism
16.	Economics	Sri Venkateswara	1) Labour economics
			2) Agricultural economics
17.	Economics	Sardar Patel	Agricultural economics
18.	Economics	Osmania	Economics of Planning
19.	Economics	Madras	Economics of applied welfare and applied development
20.	Economics	Utkal	Rural Development and Regional Planning
21.	Economics	Rajasthan	Economic Development issues with special referen to Rajasthan Economy
22.	Economics	Jawaharlal Nehru	1) Planning and industrialisation
			2) Trade and development

APPENDIX - XX (Contd.)

No.	Subject	University/Institution	Thrust area (s)
	Politlcal Science	Calcutta	Indian politics w.s.r.t. regional politics
	Political Science	Delhi	1) Indian Political studies 2) Peace studies 3) Political theory 4) Politics and developing countries 5) Development administration in India
	Political Science	Jadavpur	1) International relatins 2) Defence and Strategic studies
	Political Science	M.S. University of Baroda	1) International relationos theory/Internatinal political economy/World over studies 2) Comparative foreign policy studies with particular emphasis on Indian foreign policy analysis 3) International organisations and contemporary and projected dimensionso of the International legal order 4) Strategic studies of defence analysis 5) Conflict analysis and pace research studies
	Political Science	Hyderabad	a) International studies with focus on 3rd world states b) Political theory with social focus on Socialist theory & programmes
	Political Science	Rajasthan	Indian political traditions and contemporary pollitical structures and processs in India
	Pol. & Public Administration	Poona	Indian Govt., Politics and administration with particular reference to Maharashtra
	Ancient History	Allahabad	1) Socio-economic History of India 2) Archaeology
	Modern History	Calcutta	1) Economic History of Modern India 2) Modern Indian History w.r.t. Agrarian History, social History & Intellecual History
	History & Archaeology	Karnatak	Art archaeology & Popular Folk Culture
	History	M.S.University of Baroda	1) Medieval archaeology and History of modern India 2) Medieval art, archaeology Equigraphy and Munismatics
	History	Mysore	Problems and Modern South Indian History w.d.r.t. Socio-economics History of region
	A.I.H.C. & Archacology	Banaras Hindu	a) Sources of History, Archaeology & Literary Sources b) History of religion c) Palaeography
	Art History	M.S. University of Baroda	Indian and Western art w.s.r.t. Vastha Shastra & Vashtushilepa
	History	Jawaharlal Nehru	Indian History
	History	Patna	Socio-economic history of Medieval India w.s. emphasis on urban problems.
	History	Hyderabad	Social and Cultural History of Deccan through ages
	History	Delhi University	Social & economic History of India
	History	Gujarat Vidyapeeth	a) Freedom History b) Archive History

APPENDIX - XX (Contd.)

Sl. No.	Subject	University/Institution	Thrust area (s)
42.	Philosophy	Banaras Hindu	1) Different schoolls of Indian philosophy in the context of Indian Culture 2) Indian religion with a comparative orientation 3) Philosophy of languages grammer
43.	Philosophy	Delhi	1) Indian Logic and epistemology including the philosophy of languages 2) Social philosophy including w.s. emphasis on Indian thinking
44.	Philosophy	Panjab	1) Social philosophy including the sociolostic thoug in the context of Indian social reality 2) Philosophy of culture including ansthetics and ethics w.s.r.t. Indian Philosophical traditions
45.	Philosophy	Rajasthan	1) Logic and Philosophy of Science 2) Indian Philosophy 3) Philosophy of Law
46.	Philosophy	Visva-Bharati	1) Philosophy of art and culture 2) Mataphysics and religion
47.	Philosophy	Utkal	1) Analytic studies of basic values 2) Analytic studies of basic concept in Indian Philoso
48.	Philosophy	Allahabad	1) Schools of Vedanta 2) Logic and epistemology
49.	Philosophy	Andhra	Philosophy, religion and culture w.s.r.t. vedanta and Budhism
50.	Philosophy	Poona	1) Logic & Philosophy of Science 2) Classical Indian Philosophy 3) Socio-Cultural and moral philosophy
51.	Social Work	M.S./University of Baroda	Anti-poverty and Rural development programme
52.	Social work	Delhi	Social Policy and development and innovative forms of social work practice
53.	Social work	Jamia Millia Islamia	Social & human resource development
54.	Sociology	Jawaharlal Nehru	1) Sociology of Development and modernisation 2) Sociology of profession and professionalization 3) Sociology of Social movement and mobilisation 4) Sociology of Agrarian structures and precesses 5) Studies of marginal group: minorities & ethics communities
55.	Sociology	Panjab	1) Development Studies 2) Urban Studies 3) Population Studies
56.	Sociology	Ravi Shankar	1) Continuity change in folklore and traditional culture in the following aspects: i) studies of traditional folkculture ii) Studies of elitic traditions iii) Dynamics of Indian Society
57.	Sociology	Bangalore	1) Dynamics of Rural transformation 2) Institution of precess of Development
58.	Sociology	Osmania	Rural Urban Development

APPENDIX - XX (Contd.)

No.	Subject	University/Institution	Thrust area (s)
	Sociology	Poona	Sociology of Development
	Sociology	Banaras Hindu	Regionalism and patterns of Rural transformation w.s.r.t. U.P. from a comparative perspective
	Psychology	Delhi	1) Cognitive Processes 2) Applied Social Psychology
	Psychology	Bangalore	Development of Human Resources and Psychological well being
	Psychology	Gorakhpur	1) Environment and Human Development 2) Experimental theoretical Psychology
	Psychology	SriVenkateswara	Life soan development psychology w.s.e. on ageing (Gero-psychology)
	Anthropology	Delhi	Human Ecology
	Anthropoloty	Punjab	Anthropology of North West India Biological and Socio-logical Dimension (w.r.t. Punjab, Haryana & H.P.)
	Anthroology	Utkal University	Anthropology of Regional development with special reference to Orissa
	Education	Himachal Pradesh	Education of the disadvantaged
	Education	Kerala	Studies in learning curriculm and educational technology
	Education	Kurukshetra	1) Educational Management 2) Educational tehnology
	Linguistics	Delhi	1) Theoretical linguistics 2) Socio Linguistics 3) Applied Linguistics
	Linguistics	Deccan College, Pune	1) Experimental phoneti cs and phonology 2) Grammer and semantics of South Asian Linguistics
	English	Jadavpur	Renaissance studies/19 century studies/Theory and practice of translation
	Sanskrit	Jadavpur	1) Literature and literacy critisism and Philosophy of Lsnguage 2) Indian Philosophy
	Sanskrit	Karnatak	1) Literature and literacy critisism 2) Cedants system of philosophy
	Buddhist Studies	Delhi	1) Pali based Buddhism 2) Sanskrit (Hybird) based Buddhism and Buddhist Phisolophy 3) History, Art, Architecture and Culture of Philosophy
	Comparative Literature	Jadavpur	1) Comparative Indian Literature 2) The Third world Literatures 3) Translation 4) East-West relations
	Urdu	Kashmir	1) Culturology of Urdu Literature with special reference to Kashmiri language and Litt. 2) Urdu journalism and Mass Media
	Urdu	Osmania	Deccani language & literature

APPENDIX -XX (Contd.)

Sl. No.	Subject	University/Institution	Thrust area (s)
80.	Arabic	Aligarh Muslim	1) Modern arabic literature 2) Indo-Arabic literature and relations
81.	Telugu	Sri Venkateswara, Tirupati	1) Folklorestic studies 2) Comparative study of South Indian Literature
82.	Tamil	Madurai Kamraj	1) Indian comparative literacy studies 2) Tamil Nadu Folklore studies 3) Regional Mass Communication
83.	Punjabi	Punjabi	1) Persian and Sanskrit sources Punjabi Litt. 2) Poetic both Sanskrit and Western Folkloristic and semiotics 3) Comparative Litt. (w.r.t.MIL) 4) Courses in creative writing and literacy appre
84.	Hindi	Sardar Patel	1) Linguistics and Linguistic approach to literatu 2) Comparative literature 3) Drama and Dramaturgy
85.	Hindi	Allahabad	Modern Hindi Poetry
86.	Bengali	Burdwan	1) Language and culture of Rarh. 2) Comparative study of the Litt. of Eastern Indi Languages
87.	Oriya	Sambalpur	Folk Literature: Comparative literature: Modern Literature (poetry, fiction, etc.)
88.	Kannada	Mysore	1) Comparative literature 2) Classical studies 3) Folklore
89.	Malayalam	Kerala	1) Comparative Indian Literature and literary crit 2) Comparative language studies 3) Socio-cultural factors of literary evolution 4) Folklore studies 5) Genic studies, thematic studies Epoch and pe studies
90.	M.C. and Journalism	Osmania	Print and Communication Research
91.	M.C. Journalism	Bangalore	Audio Visual Research
92.	M.C. and Journalism	Banaras Hindu	Development Communication
93.	Law	Delhi	1) International Business Law including taxation 2) Science, Technology & Environment Law, Law & Development.

APPENDIX-XXI

List of Departmental Research Support Projects in Humanities and Social Sciences (as on 31.3.1991)

Subject	University/Institution	Thrust area (s)
Marathi	Marathwada	Ancient Literature-Mahanubhava Modern Literature, Folk literature
Assamese	Gauhati	Survey of dalects of Mayang & Doom Dooma area. Eduting of old Manuscripts, collection & analysis of Folklore material study of linguistic variation in South Kamrup and South, Go-care.
Music & Musicology	Banaras Hindu	Music and Musicology
Education	SNDT Woman's	Development and trout of a package of techniques and materials for identifying and developing research aptitute among PG students of education
Philosophy	Hyderabad	Philosophy of language and philosophy of Religion
Education	South Gujarat	Use of Tech. for developing the programme in group guicance, Development of tryout multi media package on population education
Philosophy	Noth Eastern Hill	Rationality, Justification and Tribal throught Indian philosophy of Religion
Anthropology	Calcutta	Man and Environment: An enthropological study
Anthoropology	Lucknow	Social Anthropology and Morphological Genetic charactera in physical Anthrology
Geo Politik	Panjab	Geo Politik
Pol. Science	Osmania	Political Economy of India and state politics in India
History	H.N.B. Garhwal	Multi-discibinary Archaeological studies in Mid-Central Himalaya people and their response to material and environment
Economics	Jammu	Macro-Economics Analysis; Agricultural Economics
Social Work	Lucknow	1) Industrial Relations and personnel Management 2) Medical and Psychiatric social work 3) Criminology and correctional administration 4) Family child Welfare 5) Rural Development 6) Social Policy, Planning and development 7) Social welfare administration and Social security 8) Social Research & Statistics
Hindi	Sri Venkatesware	Comparative study of Hindi and Telgu Literature
Persion	Kashmir	1) Teaching of modern classical persian literature 2) Research in persian literature
Social Work	Andhra	Social Development and family welfare (teaching, research & practice)
Social Work	Rajasthan Vidyapeeth	Tribal women and unorganised landless labour and other marginal grouips.

APPENDIX-XXII

Centres of Advanced Studies in Sciences, Engg. and Tech. as on 31.3.1991

No.	Department	Univ./Colleges	Thrust/Major Areas of Research
1.	Marine Biology	Annamalai	Marine Biology Estuarine biology, Pollution & Toxicology, Fishery biology, plankton productivity, Microbiology & Ecology
2.	Maths	Bombay	Pure Mathematics
3.	Radio Physics & Electronics	Calcutta	Solid state Electronics & Devices, Space Science, System Science
4.	Botany	Delhi	Plant Morphology (Experimental) and Embryology Tissue Culture, Plant Biochemistry, Populatin Biology and Ecology
5.	Chemistry	Delhi	Chemistry of Natural Products
6.	Physics	Delhi	Theoretical physics & Astro physics
7.	Zoology	Delhi	Cell Biology including Cytogenetics, Entomology, Endocrinology, Fish & Development Biology, Environmental Biology
8.	Botany	Madras	Plant pathology & psycology
9.	Pure Maths	Panjab	Pure Maths and Applied Maths
10.	Geology	Panjab	Himalayan Geoplogy Palaeontology
11.	Mathematics	Calcutta	Applied Maths
12.	Applied Chemistry	Bombay	Conservation of water & energy in chemical processing of textiles, computerised processes, Development of finishing agents, Pollution control in Textile processing.
13.	Astronomy	Osmania	Experimental astronomy
14.	Pure maths	Madras	Algebra, Geometry and Topology

APPENDIX-XXII (Contd.)

Department	Univ./Colleges	Thrust/Major Areas of Research
Bio-chemistry	I.I.Sc., Bangalore	Protein, lipids vitamins, Genetic Engg. Immunology in allergy & fertility control, Reproductive Physiology, nherited disorders, IBioenergetics and Plant biochemistry
Botany	Banaras	Algology Ecology
Met. Engg.	Banaras	Physical and Process Metallurgy
Botany	Calcutta	Cell & Chromosome Research
Inorganic and Physical Chemistry	I.I.Sc.	a Synthesis, Structure & reactivity of Inorganic Molecules. b. Theoritical and experimental electro chemistry w.r.t. electrode phenomena and the energy storage. c. Theoretical chemistry and Spectroscopy.
Zoology	Banaras	Cell Physiology & Bio-chem, cytogenetics reproductive biology
Biophysics	I.I.Sc.	Structure & Interaction of biomoleculs
Pure Chemistry	Calcutta	Natural products
Physics	I.I.Sc.	Condensed matter physics & the physics of biomolecules
Solid State Chemistry	I.I.Sc.	Solid State Chemistry
Chemistry	Panjab	Thermodynamics
Physics	Poona	Material Science and solid state Physics
Electronics	Banarus	Microwave tubes and Microelectronics
Physics	Banaras	Physics of materials
Physics	Panjab	Nuclear Physics Solid state physics High Energy physics (Expt & Theory in all areas)
Mining Engg.	Banaras	Rock mechanics & ground control
Mining Engg.	I.S.M.	Innovative mining systems with more emphasis on coal mining technology
Civil Engg.	I.I.Sc.	(1) Geotech Engg-Environmental Geo technique (2) Hydromechanics & water resources Engg-water resources assessment control & management (3)Structural Engg-Expert systems in structural Engg.
Production Engg.	Jadavpur	High energy density manufacuring processes
Electrical Engg.	Jadavpur	Control system

APPENDIX-XXII (Contd.)

No.	Department	Univ./Colleges	Thrust/Major Areas of Research
35.	Mech. & Industrial Eng..	Roorkee	Industrial and environmental and noise pollution and computer aided mechanical engg.
36.	Molecular Biology	Banaras	Molecular Biology & Genetic Engg.
37.	Elect. Engg.	I.I.Sc.	Power control and signal processing
38.	Metallurgy	I.I.Sc.	Material processing
39.	Organic chemistry	I.I.Sc.	Organic chemistry
40.	Geology	Jadavpur	Economic Geology and Structural Geology
41.	Chemical Engg.	Bombay (UDCT)	Multiphase reacting multiphase reactors seperating process.

APPENDIX - XXIII
Department of Special Assistance in Sciences, Engg. & Technology
(As On 31.3.1991)

Department	Univ./College	Thrust/Major Areas of Research
Statistics	Poona	Statistic inference
Botany	Andhra	Plant Cytogenetics
Geology	Andhra	Marine Geology
Biochemistry	Lucknow	Host parasite relationship
Biochemistry	M.S. Univ. of Baroda	Neurochemistry and Nutrition
Mathematics	Poona	Algebra & Algebric Geomentry, functional analysis & operator
Physics	Andhra	Ionosphere & upper atmosphere, spectroscopy and laser physics Ultrasonics and solid physics, Theoritical Physics
Chemistry	Allahabad	Coordinatin and structural chemistry reaction kinetics including ultrasonics, chemistry of plant products
Chemistry	Osmania	Natural products
Chemistry	Poona	Organic, Physical, b=Biochemistry
Chemistry	Madras	Organic Chemistry
Chemistry	Rajasthan	Synthetic Inorganic and organometallic chemistry
Geography	Aligarh	Population Geography, Land use agricultural geography
Zoologyt	Calcutta	Entomology and Fisheries
Botany	Lucknow	Plant Nutrition
Bio-Sciences	Maduri Kamraj	Biochemistry and Molecular Biology, Development of Biology & Immunology
Geography	Osmania	Urban and electoral Geography
Botany	Patna	Cytogenetics and plant breeding
Earth Sciences	Roorkee	Eng. Geoscience
Physics	Roorkee	1. Theoritical and experimental solid state physics 2. Physics and pollution products
Chemistry	Sardar Patel	Polymers
Zoology	Marathwada	Comparative animal physiology and invertebrate endocrinology
Geology	Mysore	Precambrian Palaeontology Petrology, Hydro-Geology, Geo-Chemistry and high pressure.
Maths	Bangalore	Fluid Mechanics (Magneto hydrodynamics), elasticity numerical methods and differential equations
Physics	Aligarh	1. Theoretical Physics in high energy and Nuclear Physics 2. Laser Raman Spectrosophy including study of materials
Chemistry	Jadavpur	1. Trace and ultratrace analysis of inorganicions inclu-environmental pollutants

APPENDIX - XXIII (Contd.)

No.	Department Univ./College	Areas of Research	Thrust/Major
			2. Solvent extration and chromotographic meth in seperation of metal clusters and recovery metals of strategic importance
			3. Photochemistry including synthesis and mechanistic studies in the energy related res
			4. Synthetic inorganic chemistry, organometallic metallophorphrins, metal cluster with special to their use
			5. Theoritical chemistry with special ref. to liquid solotuion
27.	Chemistry	Hyderabad	Organic Chemistry
28.	Pharmacy	Nagpur	Stability and formulations of pharmaceutical disp ing, Pharmaceutics, Radio-Pharmaceutics
29.	Pharmacy	Punjab	Sythetic medicinal bio-organic chemistry, Pharma ceutics, Pharmacology
30.	Chemical Engineering	Anna	Crystal Growth
31.	Civil Engineering	Roorkee	Civil Engg.
32	Earthquake Engineering	Roorkee	Earthquake Engg.
33.	Ceramic Engineering	Banaras	Glass tehnology
34.	Maths	Aligarh	Algebra analysis (both classical and functional analysis).
35.	Maths	Jadavpur	Advanced topology & functional analysis (pure).
36.	Botany	Kalyani	Applied Seoimology.
37.	Micro biology	M.S.univ. of Baroda	Molecular taxonomy.
38.	Geology	M.S. Univ. of Baroda	Microbiology
39.	Maths	Madurai Kamraj	Quarternary Geology (Basic & applied).
40.	Aquatic Biology & Fisheries	Kerala	Algebra, Number Theory.
41.	Geology	Lucknow	Aquatic Biology & Fisheries
42.	Zoology	Punjab	Paleanotology, Stratigraphy
43.	Zoology	Rajasthan	Protozoology and cell biology
			1. Comparitive endocrinology
			2. Ecophysiology studies on the role of environmental processes
44.	Bio-scince	Saurashtra	Environmental Biology & Ecosystem
45.	Physics	Jammu	Experimental High Energy Physics using bubble chamber & emulsion technique.
46.	Geology	Presidency College, Calcutta	Mathematical geology, Sedimentology, Precambrian geology.
47.	Crystallography and Biophysics	Madras	Studies on theoretical and experimental aspects of X-ray analysis & other Physico-chemical and Computational methods w.r.t. conformation of Biomolecules
48.	Zoology	Mysore	Population Genetics and reproductive biology.
49.	Zoology	Andhra	Marine Parasitology and Marine ecology.
50.	Maths	I.I.Sc.	Applied Maths
51.	Zoology	Poona	Cellular and Bio-chemical parameters of growth

APPENDIX - XXIII (Contd.)

Department Univ./College	Areas of Research	Thrust/Major
Botany	Kerala	Studies on coastal ecosystem of Kerala in relation to fisheries.
Zoology	Bangalore	Cytogenetics
Physics	Calcutta	Nuclear Physics, Nuclear techniques, Applied Solid State Physics.
Geography	Banaras	Geomorphoogy, agricultural Geography.
School of Physics	Madras	Nuclear Physics, Theoretical physics.
Environmental Engineering	Anna	Public health Enggaspects of environmental, management, Waste water treatement, Water quality modelling and monitoring.
Zoology	Gujarat	Human cytognetics & Human endocrinology.
Water Resources	Anna	Hydraulic engg.
Mechnical Engineering	I.I.Sc.	Computer aided material engg.
Botany	Allahabad	Paleobotany, Plant Physiology, Micro-Biology & (Mycology, Phycology, Path).
Genetics	Osmania	Plant Genetics and Tissue Culture.
Physics	Allahabad	Solid state and Molecular Physics (Theoritical and Experimental).
Physics	Hyderabad	Laser Phycics.
Nuclear Physics	Andhra	Experimental Nuclear Physics and its applications.
Electrical Engineering	Banaras	Power systems.
Aerospace Engeering	I.I.Sc.	Aerospace Engg.
Civil Engineering	Anna	Structural Engg & urban engg.
Electrical Engineering	Anna	Power systems.
Electrical & Communication Engineering	I.I.Sc.	Accoustics
Geology	Calcutta	Petrology including ore petrology.
Life Scinces	Jawahar Lal Nehru	Radiation Biology, Plant Tissue culture, Molecular Biology & and Genetic Engg.
Geology	M.L.Sukhadia	Petrochemistry.
Botany	Rajasthan	Pathology, Physiology and Bio-chemistry.
Maths	Allahabad	Algebric and Differential topology.
Automation Engg.	I.I.Sc.	Computer Science, System science and Automation.
Botany	Burdwan	Microbiology and plant physiology.
Chemistry	Bangalore	Organic Chemistry, Physical chemistry, Biochemistry.
Chemistry	G.N.D.U.	Organic & Inorganic Chemistry, Physical & Analytical chemistry.
Biochemistry	Calcutta	Nutritional Biochemistry and Neurochemistry, Enzymology and Microbiology.
Geology	Delhi	Economic geology
Microbiology & cell Biology	I.I.Sc.	Molecular biology of Sex determination, Molecular Biology of microbacteria, Expression of the surface glycoprotein of rinderpestvirus plant tissue culture.
Geology	Kumaun	Geodynamics and Petrotectonic evolution of the Kumaun Himalaya, Environmental Investigation/ Studies, Sedimentological studies.

APPENDIX - XXIII (Contd.)

No.	Department Univ./College	Areas of Research	Thrust/Major
84.	Civil Engineering	Jadavpur	Environmental Engineering.
85.	School of Life Sciences	Hyderabad	Plant Physiology.
86.	Geography	Jawahar Lal Nehru	Major areas- 1. Regional development planning 2. Social Geography.
87.	Zoology	M.S.University of Baroda	Developmental Biology and Physiology.
88.	School of Life Sciences	Manipur	Bioecology.
89	Maths	Roorkee	Analysis and Measure theory, applied functional analysis, Ordinary and partial Differential Equations, Topology and Algebra.
90.	Chemical Engineering	Andhra	Electrochemical Engg. & Corrosion Engg.
91.	Food Technology	Jadavpur	Study & development of Continous systems, their dynamics & control strategies.
92.	Geography	Punjab	Population geography, Agricultural geography.
93.	Chemistry	Banaras	Inorganic, Organic hysical and Analtical Chemistry.
94.	Physics	Burdwan	X-ray crystallography, Solid State and Nuclear physics, laser physics, electronics, relativity & its applications
95.	Chemistry	M.S. Univ. of Baroda	1. Bioactive and Bioinorganic chemistry 2. Polymer chemistry 3. Catalysis.
96.	Physics	Cochin	Material Science Properties of thin films production
97.	Physics	Kumaun	High Energy particle physics, Relativistic Astrophysics & spectroscopy.
98.	Physics	Punjabi	Radiation physics & theoretical physics.
99.	Home science	S.N.D.T. Womens	Family resource Management and food & Nutrition.
100.	Home Science	Lady Irwin College	Communication extension.
101.	Home Science	M.S.Univ. of Baroda	Human development Womens studies Special education & Evaluation research.
102.	Food & Fermentation	UDCT, Bombay	Carbohydrate chemical & technology specifically related to millets (Rajgeera) fermentation technology enzymes related of food and pencilliin, food microbiology related to quality.
103.	Physics	Karnataka	Laser Physics and condensed physics.
104.	Botany	Jodhpur	Ecology of arid Zone, Stress Physiology and tissue culture.
105.	Applied Geology	I.S.M. Dhanbad	Precambrian Geology.
106.	Applied Geophysics	I.S.M. Dhanbad	Development of Inter pretational techniques for electro manetic and sesimic methods.

APPENDIX - XXIV
DEPARTMENTAL RESEARCH SUPPORT IN SCIENCES, ENGG. & TECHNOLOGY
(AS ON 31.3.1991)

No.	Department	Univ./College	Thrust Area
1.	Physics	Rajasthan	Material Physics
2.	Geography	Calcutta	Geomorphology Pedology
3.	Geology	Patna	Evolution of early crust of Chhotanagpur & of the Bihar Mica belt
4.	Zoology	Kalyani	Cytology (Cell Biology & Fisheries)
5.	Zoology	Aligarh	Plant nematology
6.	Physics	Sri Venkateswara	Solid state physics
7.	Physics	Osmania	Solid state physics
8.	Botany	Mysore	Seed pathology
9.	Chemistry	Gorakhpur	Non equilibrium Thermodynamics, Statistics Mechanics
10.	Electronics & Communi Engg.	Roorkee	Solid state Elct. control and guidance
11.	Metallurgical	Roorkee	Thermodynamics, metal casting tech.
12.	Botany	M.S. Univ. of Baroda	Developmental physiology
13.	Life Sciences	Devi Ahilya	Life Sciences Plant Physiology
14.	Biochemistry	Ahmednagar college	Biochemical studies
15.	Marine Sciences	Cochin	Physical oceanography and marine geology & Industrial fisheries, marine biology
16.	Chemistry	Jodhpur	Chemical Kinetics & reaction Mech. & synthesis of oligonucleotides
17.	Botany	Dr. H.S. Gaur (Sagar)	Mycology, Plant pathology and microbiology
18.	Mechanical Engg.	Andhra	Augmentation techniques dynamics of solar pond
19.	Home Sc.	Sri Avinashalingam	Home management
20.	Botany	Sri Venkateswara	Plant Physiology
21.	Physics	Bangalore	Nuclear Physics Condensed matter physics
22.	Geophysics	Osmania	Integrated mineral exploration tech.
23.	Geology	Banaras	Investigationa of precrambraian rocks of India
24.	Statistics	Gujarat	Theoretical and applied statistics
25.	Maths	Delhi	Mathematical programming and fluid dynamics
26.	Physics	M.L. Sukhdia	1. Ionospheric Phy. and Radio Comm. 2. Microcomputer and programming
27.	Zoology	Nagpur	Sericulture
28.	Botany	NEHU	Forest biology and ecology
29.	Organic Chemistry	Andhra	Marine natural products
30.	Chemistry	Gauhati	1. Inorganic chemistry 2. Physical and theoritical chemistry 3. Organic and Bio-organic chemistry
31.	Metall. Engg.	M.S. Univ. of Baroda	1. Process Metallurgy 2. Corrosion and Environment assisted failure 3. Metal casting technology
32.	Botany	Osmania	Mycology & plant pathology
33.	Zoology	Sri Venkateswara	Animal physiology

APPENDIX - XXIV (Contd.)

No.	Department	Univ./College	Thrust Area
34.	School of Life Sciences	G.N.D.U.	1. Molecular Biology Cell and microbiology 2. Genetics and Env. Biology 3. Physiology and Biochemistry
35.	Statistics	Mysore	Probability theory, weak convergence, law of integrated logarithm record value (both univariat and multivariable) and allied topics
36.	Statistic	Karnataka	Statistical inferancè
37.	Statistics	Panjab	Statistical Inference Reliability
38.	Electrical Engg.	Roorkee	Power apparatus & Electric drives system engg.
39.	Botany	Bhagalur	Operation research
40.	Zoology	NEHU	Mycotoxicology Environmental Biology and plant pathology
41.	Geology	Bangalore	Environmental Biology
42.	Geology	Karnataka	Economic Geology/Sulphides and Gold Mineraliz
43.	Geography	Kurukdhetra	Petrology, mineralogy, geochemistry Agricultural geography

APPENDIX - XXV (a)
LIST OF UGC CURRICULUM DEVELOPMENT CENTRES
(SCIENCE SUBJECTS)

1. Department of Chemistry
University of Rajasthan
Jaipur

2. Department of Earth Sciences
University of Roorkee
Roorkee.

3. The Ramanujan Instt, for Advanced Study in Mathematics
University of Madras
Madras.

4. Department of Geography
Punjab University
Chandigarh.

5. Department of Statistics
Gujarat University
Ahmedabad.

6. Molecular Bio-physics Unit
Indian Instt of Science
Bangalore.

7. Department of Biochemistry
M.S. University of Baroda
Baroda.

8. Department of Physics
Poona University
Pune.

10. Department of Zoology
Gujarat University
Ahmedabad.

APPENDIX - XXV (b)
LIST OF UGC CURRICULUM DEVELOPMENT CENTERS
(HUMANITIES & SOCIAL SCIENCE SUBJECTS)

1. Department of Economics
   University of Bombay
   Bombay.

2. Department of History
   Patna University
   Patna.

3. Department of Philosophy
   Jadavpur University
   Calcutta.

4. Department of Extension Services
   Central Instt. of English and Foreign Languages
   Hyderabad.

5. Department of Psychology
   Utkal University
   Bhubneshwar

6. Department of Anthropology
   Ranchi University
   Ranchi.

7. Department of Political Science
   M.S. University of Baroda
   Baroda.

8. Department of Education
   Kerala University
   Trivandrum.

9. Department of Commerce
   Allahabad University
   Allahabad.

10. Performing Arts (Music & Dance)
    Sangeet Bhavan
    Visva Bharati
    Shantiniketan.

11. Department of Plastic Arts
    Banaras Hindu University.

12. Department of Family and Child Welfare
    Tata Instt. of Social Sciences
    Deonar, Bombay.

13. Department of Hindi
    Banaras Hindu University
    Varanasi.

14. School of (Foreign languages)
Jawaharlal Nehru University
New mehrauli Road
New Delhi.

15. Department of Sanskrit
University of Poona
Pune.

16. The Indian Law Institute
(University of Delhi)
Bhagwandas Road.
New Delhi.

17. Department of Urdu
Aligarh Muslim University
Aligarh.

APPENDIX - XXVI

Statement Showing Grants Paid to Universities during 1990-91 (Major Head Wise) Under Plan, Engg. & Tech. & Section III (Rs. In Lakhs)

Sl. No.	University	Name of the linkage between diff. Sector	Development for quality impromentof Education	Schemes for quality Improvement of research	Programme to Reduce disparities	Programme for improve-of manage-ment	Totall	Engg. & Tech.	Total		Grand Total
Central University		Sector A	Sector B	Sector C	Sector D	Sector E		Sector F		Sectionr III	
1	2	3	4	5	6	7	8	9	10	11	12
1.	Aligarh	-	103.09	50.00	5.97	-	159.06	17.59	176.65	-	176.65
2.	Banaras	23.00	127.17	165.14	-	-	315.31	166.68	481.99	-	481.99
3.	Delhi	7.76	260.06	141.34	-	-	409.16	9.04	418.20	0.50	418.70
4.	Hyderabad	5.46	100.71	61.52	-	-	167.69	3.60	171.29	-	171.29
5.	Jawaharlal Nehru	7.53	299.55 *0.96	86.81	1.00	-	394.89 *0.96	-	394.89 *0.96	-	394.89 *0.96
6.	Jamia Milia Islamia	6.13 *0.06	91.68	16.14	88.45	-	202.40	5.29	207.69	3.05	210.74 *0.06
7.	NEHU	30.91	235.39	36.44	-	-	302.74	4.55	307.29	-	307.29
8.	Pondicherry	2.35	36.84	8.45	1.50	-	49.14	11.35	60.47	-	60.47
9.	Vishva Bharati	4.50	25.45 *0.15	12.45	-	-	42.40 *0.15	-	42.4 *0.15	-	42.40 *0.15
TOTAL		87.64 *0.06	1279.94 *1.11	578.29	96.92	-	2042.79 *1.17	218.08	2260.87 *1.17	3.55 *1.17	2264.42 *1.17
1.	Nuclear Scie. Centre	-	-	695.52	-	-	695.52	-	695.52	-	695.52
2.	Inter Univ. Consortium Indore	-	-	100.00	-	-	100.00-	-	100.00		100.00
3.	Inter Univ. Centre Poona	-	0.72	303.50	-	-	304.22	-	304.22	-	304.22
TOTAL		-	0.72	1099.02	-	-	1099.74	-	1099.74	-	1099.74

APPENDIX-XXVI (Contd.)
Institutions Deemed to be Universities

1	2	3	4	5	6	7	8	9	10	11	12
1.	Avinashilingam Institute Coimbatore	9.84	3.13	0.33	0.25	-	13.55	-	13.55		13.55
2.	Banasthali Vidyapeeth	9.29	29.48	0.30	-	-	39.07	-	39.07	-	39.07
3.	B.I.T.S. Pilani	0.40	-	5.00	-	-	5.40	58.67	64.07	-	64.07
4.	B.I.Tech. , Ranchi	1.80	3.91	0.19	-	-	5.90	33.00	38.90	0.90	39.80
5.	C.I.E.F.L. Hyderabad	-	2.15	2.53	19.87	-	24.55	-	24.55	-	24.55
6.	Dayal Bagh Edu. Inst.	7.77	36.39	0.09	-	-	44.25	8.00	52.25	-	52.25
			*0.28				*0.28		*0.28		*0.28
7.	Gandhi Gram Rural Inst.	9.35	9.15	9.70	-	-	28.20	-	28.20	-	28.20
8.	Gujarat Vidyapeeth	6.46	6.70	2.01	-	-	15.17	-	15.17	10.50	25.67
9.	Gurukal Kangri V.V.	4.53	8.25	1.31	-	-	14.09	-	14.09	-	14.09
10.	I.A.R.I. New Delhi	-	-	0.23	-	-	0.23	-	0.23	-	0.23
11.	I.I.S. Bangalore	-	52.35	375.09	-	-	427.44	229.16	656.60	2.20	658.80
12.	I.S.M. Dhanbad	-	7.60	12.43	-	-	20.03	56.34	76.37	-	76.37
13.	Rajasthan Vidyapeeth	8.00	18.00	3.35	-	-	29.35	-	29.35	-	29.35
14.	School of Planning & Arch.New Delhi	-	-	0.80	-	0.80	-	0.80	-	0.80	
15.	Shri Lal Bahadur Shastri Rashtraya Sanskrit Vidyapeeth	-	-	0.06	-	-	0.06	-	0.06	-	0.06
16.	Sh. Satya Sai Inst. of Higher Learning	0.97	41.69	0.15	-	-	42.81	1.76	44.57	0.75	45.32
17.	Tilak Maharashtra Vidyapeeth	-	14.05	3.34	-	-	17.39	-	17.39	1.29	18.68
18.	Tata Inst. of Social Science Bombay	-	20.25	4.64	-	-	24.89	35.45	60.34	0.30	60.64
19.	Thapar Inst. of Engg. & Technology	0.41	-	0.03	-	-	0.44	60.00	60.44	-	60.44
20.	Deccan Coll. P.G. & Research Inst., Pune	-	-	1.01	-	-	1.01	-	1.01	-	1.01
21.	Jamia Hamdard	-	2.80	1.63	-	-	4.43	1.34	5.77	-	5.77
22.	Central Inst. of Higher Tibetan studies	-	0.30	-	-	-	0.30	-	0.30	-	0.30
TOTAL		58.82	256.20	423.42	20.92	-	759.36	483.72	1243.08	15.94	1259.02
			*0.28				*0.28		*0.28		*0.28

* By Adjustment

APPENDIX - XXVI (Contd.)

1	2 State Univ.	3	4	5	6	7	8	9	10	11	12
ANDHRA											
1.	Andhra	1.00	30.20	139.01	13.00	-	183.21	63.15	246.36	-	246.36
2.	A.P. Open		-	7.15	-	-	7.15	-	7.15	-	7.15
3.	J.N. Technical	2.33	0.67	1.97	-	-	4.97	48.89	53.86	2.00	55.86
4.	Kakatiya	3.64	4.33	12.10	-	-	20.07	8.23	28.30	-	28.30
5.	Nagarjuna	-	48.43	6.64	-	-	55.07		55.07		55.07
6.	Osmania	11.24	31.65	126.65	2.15	-	171.69	42.60	214.29	-	214.29
7.	Sh. Krishna Devaraya	3.66	49.32	7.08	3.00	-	63.06	21.99	85.05	-	85.05
8.	Sh. Padmavati Mahila	3.00	5.25	1.41	-	-	9.66	-	9.66	-	9.66
9.	Sh. Venkateshvera Uni	8.95	37.77	33.32	5.00	-	85.04	27.72	112.76	-	112.76
10.	Telugu		11.00	*0.04 0.33	-	-	*0.04 11.33	-	*.0.04 11.33	-	*0.04 11.33
TOTAL		33.82	218.62	335.66 *0.04	23.15	-	611.25 *0.04	212.58	823.83 *0.04	2.00	825.83 *0.04
ASSAM											
1.	Dibrugarh	-	14.04	0.06	-	-	14.10	1.00	15.10	2.00	17.10
2.	Gauhati	3.27	21.42	31.22	0.50	-	56.41	-	56.41	2.00	58.41
TOTAL		3.27	35.46	31.28	0.50	-	70.51	1.00	71.51	4.00	75.51
BIHAR											
1.	Bhagalpur	7.45	2.64	20.68	-	-	30.77	-	30.77	-	30.77
2.	Bihar	-	27.52	1.52	-	-	29.04	-	29.04	-	29.04
3.	Birsa Agriculture	-	-	0.10	-	-	0.10	-	0.10	-	0.10
4.	L.N. Mithila	0.89	0.76	0.55	-	-	2.20	-	2.20	-	2.20
5.	Magadh	-	45.50	0.39	-	-	45.89	-	45.89	2.00	47.89
6.	Patna	6.50	41.22	25.42	-	-	73.14	6.79	79.93	-	79.93
7.	Ranchi	14.28	6.51	0.57	-	-	21.36	-	21.36	-	21.36
8.	K.S.D. Sanskrit, Dharbhanga	-	7.00	-	-	-	7.00	-	7.00	-	7.00
TOTAL		29.12	131.15	49.23	-	-	209.50	6.79	216.29	2.00	218.29

* By Adjustment

APPENDIX - XXVI (Contd.)

1	2 State Univ.	3	4	5	6	7	8	9	10	11	12
HIMACHAL PRADESH											
1.	Himachal	5.98	16.88	1.92	-	-	24.78	-	24.78	3.00	27.78
JAMMU & KASHMIR											
1.	Jammu	1.50	13.50	13.66	-	-	28.66	11.50	40.16	-	40.16
2.	Kashmir	14.16	27.48	4.06	-	-	45.70	-	45.70	-	45.70
TOTAL		15.66	40.98	17.72	-	-	74.36	11.50	85.86	-	85.86
GOA											
1.	Goa	-	24.93	4.69	-	-	29.62	-	29.62	-	29.62
GUJARAT											
1.	Bhavnagar	8.00	10.00	0.35	-	-	18.35	-	18.35	-	18.35
2.	Gujarat	15.12	21.08	8.03	19.46	-	63.69	-	63.69	-	63.69
3.	M.S. Univ. Baroda	4.50	9.24	103.75	-	-	117.49	118.94	236.43	-	236.43
				*0.07			*0.07		*0.07		*0.07
4.	Sardar Patel	4.10	22.08	18.38	1.00	-	45.56	5.00	50.56	-	50.56
			*1.70				*1.70		*1.70		*1.70
5.	South Gujarat	2.40	29.57	1.66	-	-	33.63	-	33.63	-	33.63
6.	Saurashtra	7.25	48.08	0.97	1.50	-	57.80	-	57.80	-	57.8
TOTAL		41.37	140.05	133.14	21.96	-	336.52	123.94	460.46	-	460.46
			*1.70	*0.07			*1.77		*1.77		*1.77
HARYANA											
1.	Haryana Agriculture		0.16	1.22	-	-	1.38	-	1.38	-	1.38
2.	Kurukshetra	10.47	31.64	11.17	-	-	53.28	-	53.28	-	53.28
3.	M.D. University	4.00	1.87	3.64	1.50	-	11.01	-	11.01	-	11.01
TOTAL		14.47	33.67	16.03	1.50	-	65.67	-	65.67	-	65.67
				*0.04			*0.04		*0.04		*0.04

* By Adjustment

APPENDIX - XXVI (Contd.)

1	2 State Univ.	3	4	5	6	7	8	9	10	11	12
KARNATAKA											
1.	Bangalore	2.00	18.00	28.49	-	-	48.49	2.38	50.87	-	50.87
2.	Gulbarga	-	14.37	0.73	-	-	15.10	-	15.10	-	15.10
3.	Karnatak	5.00	14.40	28.06	-	-	47.46		47.46	2.00	49.46
4.	Mangalore	-	13.63	7.04	-	0.02	20.69	-	20.69	-	20.69
5.	Mysore	4.50	27.90	20.98	-	-	53.38	-	53.38	-	53.38
6.	Univ. of Agril. Sci. Dharwad	-	-	0.10	-	-	0.10	-	0.10	-	0.10
7.	Univ. of Agril Sci. Bangalore	-	-	011	-	-	0.11	-	0.11	-	0.11
8.	Kuvempu	-	10.00	-	-	-	10.00	-	10.00	-	10.00
TOTAL		11.50	98.30	85.51	-	0.02	195.33	2.38	197.71	2.00	199.71
KERALA											
1.	Calicut	-	23.55	13.40	-	-	36.95	-	36.95	-	36.95
2.	Cochin Univ. of Sci. & Tech.	2.46	10.64	9.99	-	-	23.09	32.07	55.16	-	55.16
3.	Mahatma Gandhi Univ.	-	7.65	8.00	-	-	15.65	-	15.65	-	15.65
4.	Kerala	4.29	38.38	35.19	-	-	77.86	-	77.86	-	77.86
5.	Kerala Agriculture	-	-	-	-	-	-	-	-	-	--
TOTAL		6.75	80.22	66.58	-	-	153.55	32.07	185.62	-	185.62
MADHYA PRADESH											
1.	A.P. Singh	19.00	7.80	-	-	-	26.80	-	26.80	-	26.80
2.	Bhopal/Baraktulla	9.40	8.51	6.99	1.20	-	26.10	-	26.10	-	26.10
3.	Devi Ahilya	20.58	55.64	85.84	33.30	-	195.36	5.30	200.66	8.00	208.66
			*0.40				*0.40		*0.40		*0.40
4.	Dr. H.S. Gaur	5.82	29.82	6.27	-	-	41.91	2.75	44.66	-	44.66
5.	Guru Ghasidas	2.35	27.70	9.14	-	-	39.19	-	39.19	-	39.19
6.	Indira Kala Sangeet	2.90	9.19	1.76	5.00	-	18.85	-	18.85	-	18.85
7.	Jiwaji	9.40	11.07	2.03	1.50	-	24.00	-	24.00	-	24.00
8.	Rani Durgawati	-	48.03	4.06	-	-	52.09	-	52.09	-	52.09
9.	Ravi Shankaer	3.00	10.74	5.92	-	-	19.66	-	19.66	-	19.66
10.	Vikram	11.85	11.84	2.29	-	-	25.98	5.00	30.98	-	30.98
TOTAL		84.30	220.34	124.30	41.00	-	469.94	13.05	482.99	8.00	490.99
			*0.40				*0.40		*0.40		*0.40

* By Adjustment

* By Adjustment

APPENDIX - XXVI (Contd.)

1	2 State Univ.	3	4	5	6	7	8	9	10	11	12
MAHARASTRA											
1.	Bombay	17.41	16.10	210.30	-	-	243.81	89.37	333.18	-	333.18
			*0.07				*0.07		*0.07		*0.07
2.	Marathwada	12.31	22.25	7.32	-	-	41.88	-	41.88	-	41.88
3.	Nagpur	4.00	11.85	9.10	2.15	-	27.10	3.52	30.62	-	30.62
4.	Poona	3.25	7.15	29.14	28.39	-	67.93	-	67.93	-	67.93
5.	S.N.D.T. Women's	8.63	14.37	12.32	-	-	35.32	7.80	43.12	1.10	44.22
6.	Shivaji	0.67	14.34	5.91	-	-	20.92	-	20.92	-	20.92
TOTAL		46.27	86.06	274.09	30.54	-	436.96	100.69	537.65	1.10	538.75
			*0.07				*0.07		*0.07		*0.07
MANIPUR											
1.	Manipur	3.20	6.81	3.46	8.01	-	21.48	-	21.48	-	21.48
ORISSA											
1.	Berhampur	0.87	3.67	7.33	-	-	11.87	0.35	12.22	-	12.22
2.	Orissa Univ. of Agriculture	-	-	0.07	-	-	0.07	-	0.07	-	0.07
3.	Sambalpur	3.50	11.77	2.19	1.00	-	18.46	26.16	44.62	-	44.62
4.	Sh. Jagannath Sanskrit	-	-	0.08	-	-	0.08	-	0.08	-	0.08
5.	Utkal	5.00	37.54	15.22	-	-	57.76	11.00	68.76	-	68.76
TOTAL		9.37	52.98	24.89	1.00	-	88.24	37.51	125.75	-	125.75
PUNJAB											
1.	Guru Nanak Dev	-	21.78	9.65	-	-	31.43	-	31.43	2.00	33.43
2.	Panjab	1.50	16.11	130.62	-	-	148.23	17.75	165.98	-	165.98
3.	Punjab Agriculture	-	0.33	2.78	-	-	3.11	-	3.11	-	3.11
4.	Punjabi	15.75	9.44	15.84	20.00	-	61.03	-	61.03	-	61.03
TOTAL		17.25	47.66	158.89	20.00	-	243.80	17.75	261.55	2.00	263.55

* By Adjustment

APPENDIX - XXVI (Contd.)

1	2 State Univ.	3	4	5	6	7	8	9	10	11	12
RAJASTHAN											
1.	Rajasthan	0.58	57.41	36.94	-	-	94.93	-	94.93	2.00	96.93
			*0.02				*0.02		*0.02		*0.02
2.	M.L. Sukhadia	4.20	1.01	20.00	-	-	25.21	-	25.21	-	25.21
3.	Kota Open	-	-	0.10	-	-	0.10	-	0.10	-	0.10
4.	Jodhpur	-	31.69	11.06	10.97	-	53.72	5.39	59.11	-	59.11
TOTAL		4.78	90.11	68.10	10.97	-	173.96	5.39	179.35	2.00	181.35
			*0.02				*0.02		*0.02		*0.02
TAMILNADU											
1.	Algappa	-	10.61	-	-	-	10.61		10.61	-	10.61
2.	Anna	0.36	16.48	77.83	5.07	-	99.74	178.85	278.59	-	278.59
3.	Annamalai	4.55	26.27	13.66	-	-	44.48	0.58	45.06	-	45.06
4.	Bharaiar	-	10.02	3.80	-	-	13.82	4.16	17.98	4.00	21.98
5.	Bharathidasan	5.00	57.80	6.91	-	-	69.71	-	69.71	-	69.71
6.	Madras	13.60	31.38	96.03	12.75	-	153.76	-	153.76	2.00	155.76
7.	Madurai Kamraj	21.75	50.91	23.86	1.35	-	97.87	-	97.87	-	97.87
				*0.10		-	*0.10		*0.10		*0.10
8.	Mother Teresa Women's	-	10.71	0.52	-	-	11.23	-	11.23	-	11.23
9.	Tamil	2.69	9.21	2.34	-	-	14.24	-	14.24	-	14.24
TOTAL		47.95	223.39	224.95	19.17		515.46	183.59	699.05	6.00	705.05
				*0.10		-	*0.10		*0.10		*0.10
TRIPURA											
1.	Tripura	-	1.30	2,63	-	-	3.93	-	3.93	-	3.93
TOTAL		-	1.30	2,63	-	-	3.93	-	3.93	-	3.93
U.P.											
1.	Agra	-	14.72	7.84	3.00	-	25.56	-	25.56	-	25.56
2.	Allahabad	1.00	55.70	107.57	11.80	-	176.07	0.89	176.96	-	176.96
3.	Avadh	10.72	-	0.63	2.25	-	13.60	-	13.60	-	13.60
4.	Bundelkhand	-	-	0.39	0.10	-	0.49	-	0.49	-	0.49

* By Adjustment

APPENDIX - XXVI (Contd.)

1	2 State Univ.	3	4	5	6	7	8	9	10	11	12
5.	Chandersekhar Azad Unv. of Agricul. Tech.	-	-	0.20	-	-	0.20	-	0.20	-	0.20
6.	H.N. Bahuguna, Garwal Univ.	6.83	25.19	12.57	-	-	44.59	-	44.59	0.75	45.34
7.	G.B. Pant Univ. of Agriculture & Technolor	-	0.17	2.10	-	-	2.27	0.79	3.06	-	3.06
8.	Gorakhpur	23.84	19.50	30.20	0.90	-	74.44	-	74.44	-	74.44
			*0.02				*0.02		*0.02		*0.02
9.	Kanpur	9.30	1.16	6.00	-	-	16.46	-	16.46	-	16.46
10.	Kashi Vidyapeeth	0.70	5.37	1.47	2.00	-	9.54	-	9.54	-	9.54
			*0.13				*0.13	-	*0.13		*0.13
11.	Kumaun	1.35	14.84	30.73	0.50	-	47.42	-	47.42	-	47.42
12.	Lucknow	8.50	22.01	62.07	1.15	-	93.73	-	93.73	-	93.73
13.	Meerut	-	2.05	6.11	-	-	8.16	-	8.16	-	8.16
14.	Rohilkhand	2.00	3.15	3.37	-	-	8.52	-	8.52	-	8.52
15.	Roorkee	1.00	1.80	239.59	15.07	-	257.46	192.94	450.40	-	450.40
16.	Sampurnanad Sanskrit	-	9.78	2.29	2.00	-	14.07	-	14.07	-	14.07
TOTAL		65.24	175.44	513.13	38.77	-	792.58	194.62	987.20	0.75	987.95
			*0.15				*0.15		*0.15		*0.15
WEST BENGAL											
1.	Bidhan Chandra Krishi	-	-	0.76	-	-	0.76	-	0.76	-	0.76
2.	Burdwan	10.90	7.81	46.51	-	-	65.22	-	65.22	-	65.22
3.	Calcutta	6.50	32.55	216.21	0.75	-	256.01	57.28	313.29	-	313.29
4.	Jadvapur	5.55	12.85	82.58	1.00	-	101.98	97.85	199.83	-	199.83
5.	Kalyani	5.59	1.70	13.23	3.00	-	23.52	-	23.52	-	23.52
6.	North Bengal	8.44	33.59	15.87	-	-	57.90	-	67.90	-	57.90
7.	Rabindra Bharati	5.80	12.86	5.30	-	-	23.96	-	23.96	0.40	24.36
8.	Vidya Sagar	-	20.00	-	-	-	20.00	-	20.00	-	20.00
TOTAL		42.78	121.36	380.46	4.75	-	549.35	155.13	704.48	0.40	704.88
GRAND TOTAL		629.54	3382.57	4617.39	339.16	0.02	8968.68	1799.79	10768.47	52.74	10821.21
		*0.06	*3.73	*0.25							

APPENDIX-XXVII
UNIVERSITY GRANTS COMMISSION
GUIDELINES FOR PROVIDING ASSISTANCE TO COLLEGES FOR DEVELOPMENT DURING THE EIGHTH PLAN PERIOD (1990-95).

(A) 1 Development of colleges which aree responsible in a major way for undergraduate education and to a great exte even for post-graduate education is an important area in higher education from the points of view of maintenance of prope standards, ensuring optimum utilisation of facilities, promoting innovation and change, linking education to emerging occupa tional pattern, viability and equalisation fo educational opportunitiers for weaker sections of society particularly schedule caste/scheduled tribes and those belonging to educationally backward areas.

2. The financial resources for higher education during the Eighth Plan being limited, the developmerntal needs of the colleges wi hav to be carefully identified so that the resources are mainly utilised for such programmes which can make an apreciable impac on improvement of standards through modernisation and rationalisation as well as diversification of undergraduate courses i Humanities & Social Sciences, Sciences, Commerce etc. in the colleges .

3. For a majority of students going in for higher education, the first degree level is likely to be terminal. It is, therefore, necessary that the degree courses offered should be adequately strengthened and diversified to make them worthwhile to the students. The undergraduate courses need to be restructured to make them more relevant to manpower needs by developing apropriate skills which are significant not only to the students but also to the lôcal, regional and national needs and to emphasise utilisation of the natural resources and help to improve the employment opportunities for students. With this end in view, the courses should be diversified to include both basic as well as emerging inter-disciplinary and application-oriented areas and suffieient freedom should be allowed to the student to choose the courses best suited to their interest and capability.

4. A large number of non-viable colleges with low enrolment and inadequate facilities have come into existance in the past. Establishment of such non-viable colleges should be discouraged. In exceptional cases new colleges could be set up in educationally backward areas where facilities for higher education do not exist.

5. The Commission 's policy, therefore, for development of undergraduate and post-graduate education in colleges during the Eighth Plan period will have four main aims. viz., (a) Improvement of standards and quality of education, (b) Removal of disparities and regional imbalances in higher educational facilities, (c) Restructuring and diversification of courses and (d) Granting of autonomous status to deserving colleges.

To achieve these objectives, the Commission will provide assistance to the colleges which fulfil minimum eligibility conditions and have the necessary viability and potential and are striving for better standards to enable them to meet their basic needs like books and journals including strengthening of book Banks, basic scientific equipment needed for proper instructions at undergraduate level, construction of buildings, teaching and technical staff, rememdial courses for the students belonging to the weaker sections of the society, extension programme, examination reforms and participation of teachers in academic conferences, workshops/seminars in India. With a view to removing disparties and regional imbalances, assistance will also be provided to the colleges catering to the needs of Scheduled Caste and Scheduled Tribe students and for intensive development of colleges situated in backward/rural/border areas.

(B) Assistance for Development of undergraduate Education

1. The Commission will provide assistance for development of undergraduate education only to such colleges which fulfil the conditions as indicated below :-

   a. The college has at least three teaching departments with at least ten permanent teachers (or teachers oppionted on regular basis in case of Govt. colleges) including the Principal but excluding the Physical Training Instructor/Director of Physical Education and the Librarian relaxable to five in the case of Women's colleges, colleges located in backward/rural/border areas and colleges catering to the needs of Scheduled caste and Scheduled Tribe students.

   b. The college must have atleast 250 students in degree classes and above (beyond + 2 stage) relaxable to 150 in the case of Women's colleges and colleges located in backward/rural/border areas and 100 in case of colleges catering to the needs of Scheduled Caste and Scheduled Tribe students. So far as the colleges catering to the needs of SC/ST students are concerned, those colleges will be considered for assistance if the number of SC/ST students is not less than 20% of the total enrolment or 35 whichever is more. The ceiling of assistance for colleges will be as follows:-

   Arts, Science, Commerce/Multi-faculty Colleges :

(i) General Category

S.No.	Student's enrolment	ceiling of Assistance
1.	250 to 500	Rs. 5 lakhs
2.	501 to 1000	Rs. 6 lakhs
3.	1001 to 2000	Rs. 8 lakhs
4.	2001 to 3000	Rs. 9 lakhs
5.	3001 and above	Rs. 10 lakhs

(ii) Women's Colleges and colleges located in backward/rural/border areas.

S. No.	Students' enrolment	Ceiling of Assistance
1.	150 to 500	Rs. 5 lakhs
2.	501 to 1000	Rs. 6 lakhs
3.	1001 to 2000	Rs. 8 lakhs
4.	2001 to 3000	Rs. 9 lakhs
5.	3001 and above	Rs. 10 lakhs

(iii) Colleges catering to the needs of SC/ST students.

S. No.	Students' enrolment	Ceiling of Assistance.
1.	100 to 500	Rs. 5 lakhs
2.	501 to 1000	Rs. 6 lakhs
3.	1001 to 2000	Rs. 8 lakhs
4.	2001 to 3000	Rs. 9 lakhs
5.	3001 and above	Rs. 10 lakhs

(iv) Other Category

The colleges which do not come under the category of single faculty colleges, Women's colleges, colleges located in backward/rural/border areas and colleges catering to the needs of Scheduluted Caste and Scheduled Tribe students but have students enrolment between 150 to 249 in degree classes and above (beyond + 2 stage) with 5 permanent teachers (or teachers appointed on regular basis in case of Government colleges) including the Principal but excluding the Physical Training Instructor/Director of Physical Education and the Librarian, will be provided marginal assistance on the following items:

1) Books and Journals and establishment/ strengthening of Book Bank @ Rs. 100 per student;

(ii) Basic Scientific equipment including audio-visual Material and reprographic facilities @ Rs. 200 per student;

(iii) Participation of teachers in academic conferences in India @ Rs. 500 per each permanent teacher (or teacher appointed on reegular basis in case of Government Colleges) subject to a maximum of Rs. 10,000/-.

Assistance for development of single faculty colleges:

a) Law Colleges running 3 years LL.B. courses: Rs 2 lakhs as ceiling of assistance

1) The college must have a minimum enrolment of 100 students in all the three years taken together.

2) There must be 5 full time permanent teachers (or teachers appointed on regular basis in case of (Government colleges) exclusively engaged in teching Law at that institution including the principal.

(b) Colleges of Social Work: Rs. 2 lakhs as ceiling of assistance for undergraduate courses:

i) The minimum number of students in the college must be 70 in degree classes and above (beyond + 2 stage).

ii) There must be at least 5 permanent teachers (or teachers appointed on regular basis in case of Government Colleges) including the Head/Principal.

iii) No assistance will be available for purchase of Jeep/vehicle even for field work.

(c) Teacher Education/Teacher Training Colleges :

(D)

i) For Colleges offering B.Ed.: Rs. 2 lakhs as ceiling of assistance

a) The minimum number of students in the college must be 70.

b) The minimum number of permanent teachers (or teachers appointed ono regular basis in case of Government Colleges) in the college must be 5 including the principal but excluding the physical training instructor/Director of Physical Education and the Librarian.

c) The admission of students in the college should not exceed the intake capacity prescribed by the University or the appropriate authority.

ii) For colleges offering B.Ed., & M.Ed. Rs 3 lakhs as ceiling of assistance.

a) The minimum number of students in the colege must be 80.

b) The minimum number of permanent teachers (or teachers appointed on regular basis in case of Government Colleges) in the college must be 7 including the principal but excluding the Physical Traiining Instructor/Director of physical Education and the Librarian.

c) The admission of students should not exceed the intake capacity prescribed by the university or the apporopriate authority.

(d) Physical Education Colleges : Rs. 2 lakhs as ceiling of assistance for under-graduate courses

i) The minimum number of students in the college must be 70 in degree classes and above (beyond + 2 stage).

ii) The minimum number of permanent teachers (or teachers appointed on regular basis in case of Government Colleges) in the colleges must be 5 including the principal.

iii) The admission of students in the college should not exceed the intake capacity prescribed by the University or the appropriate authotity.

(e) Home Science Colleges: Rs. 2 lakhs as ceiling of assistance for Under-Graduate Courses

i) The minimum number of students in the college must be 70 in degree classes and above (beyond + 2 stage).

ii) The minimum number of permanent teachers (or teachers appointed on regular basis in case of Govt. Colleges) in the college must be 5 including the Principal but excluding the Physical Training Instructor/Director of Physical Education and the Librarian.

iiii) The admission of students should not exceed the intake capacity prescribed by the University or the appropriate authority.

(f) Colleges of Music and Fine Arts: Rs. 2 lakhs as ceiling of assistance for Under-Graduate Courses

i) The minimum number of students in the college must be 40 in degree classes and above (beyond + 2 stage)

ii) The minimum number of permanent teachers (or teachers appointed on regular basis in case of Govt. Colleges) in the college

must be 5 including the Principal and the accompanists and part-time teachers on the basis of normal work load or full time teacher.

(g) Colleges teaching Classical language (Sanskrit/Pali/Prakrit/Arabic/Persian): Rs. 2 lakhs as ceiling of assistance for Under-Graduate courses

i) The minimum number of students in the college must be 40 in degree classes and above (beyond + 2 stage).

ii) The minimum number of permanent teachers (or teachers appointed on regular basis in case of Govt. Colleges) in the college must be 5 including the Principal but excluding the Physical Training Instructor/Director of physical Education and the Librarian.

(D) Assistance for Development of Postgraduate Education(Arts, Science, Commerce/Multi-faculty/Single faculty Colleges)

1. The Colleges which have postgraduate departments in arts/science/comerce and which fulfil the following norms will be considered for assistance for development of postgraduate education in the department concerned:

   (a) A department coming under humanities and Social Science, Commerce , Mathematics, Statistics, Geography, Psychology, Law and Music & Fine Arts must have atleast 4 teachers including 2 teachers holding M.Phil/Ph.D. Degree. A Science Department must have atleast 6 teachers including 3 teachers holding M.Phil/Ph.D. Degree.

   (b) The department subscribes to atleast 3 standard academic journals in the subject.

   (c) The department has atleast one major research project (funded by UGC or some other agency) undertaken by faculty members or atleast three publications by faculty members in some standard journals during last 3 years preceding the date of submission of the proposals. Minor research projects undertaken by the faculty members will not be considered.

   (d) The minimum strength of full-time students in the two year postgraduate course must be twenty relaxable by five in case of Music and Fine Arts.

2. The ceiling of assistance for various departments would be as under :-

(a) Humanities and Social Sciences, Commerces, Law and Music & Fire Arts Departments	Rs. 2 Lakhs for each Department
(b) Geography, Mathematics, Statistics and Psychology Departments	Rs. 2,50 Lakhs for each Department
(c) Sciences Departments like, Deptts. of Physics, Chemistry, Bio-Chemistry Home Science Pysiology and Micro-biology etc.	Rs. 3 Lakhs for each Departments

3. Proposals for the creation of teaching posts (professor/reader/lecturer) in a postgraduate department ina college will be considered on merit within the ceiling indicated above. The qualifications and mode of recruitment to these posts wherever aproved by the Commission will be the same as for similar posts in a university department and Commission's assistance for these posts will be available upto 31st March, 1995, provided these posts are created on a permanent basis and the State Government/College agrees to meet the expenditure on these posts as committed expenditure with effect from 1.4.1995.
4. The Commission may assess the requirements of post-graduate departments with the help of expert committee, wherever necessary.

(E) Preparation of Development Proposals by the Colleges

(i) The Colleges will formulate composite proposals for development during the Eighth Plan period for improving the standards of teaching and research at various levels. For this purpose,the colleges may include propsals for (a) books and journals including setting up of book banks and/or Strengthening the existing book banks with a view to augmenting the facilities and improving reading habits among the students, (b) equipment needed for improving the standards, (c) remedical courses for weaker students including those of SC/St categories with the help of senior students and part-time staff, (d) extension activities in the neighbouring areas for the benefit of the weaker sections of society in the form of specific programmes, (e) additional teaching and technical staff with a view, to improving the standard of teaching, (f) examination reform, (g) data collection, field work and related work, if any relating to research work (only applicable to post-graduate departments), (h) participation of teachers in academic conferences in India and (i) construction/extension of various types of buildings such as library, laboratories, class rooms, workshop shed, animal house, Men's Hostel, Women's Hostel, staff quarters, teachers hostel, improvements of facilities in existing hostels. (Evening Colleges will receive assistance for construction of only staff quarters/teachers hostels under building projects)

The College may set up a Planning Board to formulate its development proposal after identifying the real needs. It is not necessary that a college should seek assistance for all the items indicated above. The pattern of assistance for various items is as under:-

S. No.	Item	Share of UGC Assistance
1.	Books and Journals including book banks.	100%
2.	Equipment including laboratory and audio-visual equipment	100%
3.	Teaching and Technical Staff including professional staff for library	100%
4.	Extention Programme	100%
5.	Examination Reform	100%
6.	Remedial Courses for weaker students	100%
7.	Date collection (only applicable to Post-Graduate Development)	100%
8.	Participation of teachers in academic conferences in India	100%
9.	Academic buildings including extension of laboratories	100%
10.	Library Building	100%
11.	Workshop shed/ Animal House/Museums Green House	100%
12.	Men's Hostel	75%
13.	Women's Hostel	100%
14.	Staff Quarters/Teachers Hostel	75%
15.	Canteen Building/Non-resident student Centre-Building and Equipment	75%
16.	Improvement of Facilities in the existing hostels	75%
17.	Health Centre-Building and Equipment	75%

(ii) The Colleges are expected to utilise 20% of the total ceiling for books/journals, 20% of thr total ceiling for equipment, 40% of the total ceiling for building projects and the remaining 20% for other programmes. However, assistance from the Commission for all the building projects including expenditure incurred after 31.3.1991 for the building projects approved in Seventh Plan period or in any earlier plan period will in no case exceed 50% of the total ceiling. The Colleges which do not run Science courses may not necessarily need equipment grants. In any case, allocation for equipment would be considered only after getting the details of equipment actually needed.

(iii) Assistance for all categories of posts approved inthe Eighth Plan will be available only upto 31st March, 1995 on the specific condition that the posts are created on permanent basis and firm commitment is given to meet full expenditure on these posts by the College/State Government from 1.4.1995 as committed expenditure.

(iv) Assistance for participation of teachers inacademic conferences within India will be available to all categories of colleges @ Rs. 500 for each permanent teacher (or teacher appointec of regular basis in case of Government colleges) **subject to a Maximum of Rs. 10,000/-**. This expenditure will be covered within the overall ceiling of assistance for which the college will be entitled for development of undergraduate education.

(v) In preparing the proposals for development, the colleges have to give first priority to the completion of building projects which were taken up in the Sevanth Plan or in any earlier plan period and which have not been completed. Expenditure incurred after 31.3.1991 by the colleges for completion of the building projects approved by the Commission inthe seventh Plan or in any earlier plan period would be treated as first charge on the Eighth Plan allocation. But expenditure actually incurred in respect of approved building projects upto 31.3.1991 and grant paid for them on or after 1st April, 1991 will not be treated as first charge on the Eighth Plan allocation within the limit fixed for the building projects. The colleges may review suh building projects which were approved during the Seventh Plan or in any earlier plan period but which were deferred and see whether priority could be given to those building projects to be taken up as new projects inthe Eighth Plan period .

(vi) Expenditure incurred on other approved item such as books, equipment, remedial courses, extension programme, teaching and technical staff, F.I.P. (teacher fellowship) etc. after 31.3.1991 by the colleges will be treated as first charge on the Eighth Plan allocation. Also expenditure incurred upto 31.3.1991 on teacher fellowships over and above the allocation made for F.I.P. (teacher fellowships) during the Seventh Plan period will be treated as first charge on the Eighth Plan allocation. Expenditure actually incurred in respect of these items upto 31.3.1991 not exceeding, the allocations made for each item during the Seventh Plan period and grant paid for them ono or after 1st April, 1991 will not be treated as first charge on the Eighth Plan allocation.

(vii) While making a proposal for construction of hostel for students, the college should keep inview the need for reserving 20 % seats for students belonging to Scheduled Caste and Scheduled Tribe, which could be given to other students only if requisite number of SC/ST students is not available.

(viii) The College need not send Plans and estimates for various building projects at the time of sending the initial propoasl . They may only send line/sketch plans and estimated cost and indicate the period required for completion of the building along with justification for proposing construction of a particular building or extension of an existing building indicating the extent to which the present building is being utilised. Plans and certified detailed estimates may be prepared as per guidelines of the U.G.C. only after the proposal is accepted "in principle" by the Commission.

(Ix) Each proposal will be considered by the Commission on its own merit and assistance will be approved for various items and programmes keeping in view the needs of the college and its viability. It is not obligatory for the Commission to accept all items and the amount processed for each item.

(x) Grants against the allocation to be made for each approved item during the Eighth Plan period will be released only after the receipt of audited accounts and utiliation certificates against the grants paid for these items during the Seventh Plan period or eaarlier plan period as the case may be.

(ix) The Colleges seekiing assistance for development during the Eighth Plan should prepare an integrated plan for all departments and general amenities within the ceilings prescribed and send the same duly completed in all respects in the prescribed proforma to their affiliating unniversities who may examine these proposals thoroughly as per prescribed norms and will also give necessary certificates as required at appropriate placess in the prescribed proforma. The opoerational mechanism for evaluating these proposals by the Commission is being communicatd separately to the affiliatinf universities. The proposals received directly from the colleges will not be entertained. Only colleges which have fulfilled all conditios of affiliation prescribed by the universitty and are included under section 2 (f) and also declared fit to receive central assistance in terms of the rules framed under Section 12 (B) of the UGC Act in case they have been set up on or after 17.6.1972 are eligible to send the ir proposals.

Other Programmes for the Colleges:

In addition to above programmes for general development, the Commission has initiated a number of special programmes for funding beyond the above ceilings for improving quality of education in colleges.. Selection of colleges for participation in these programmes will be made on the basis of criteria laid down, for each such programme. These schemes are COSIP, COHSSIP, Restructuring of undergraduate courses, Autonomous Colleges, Computer facilities, National Adult Education Programme, extension activities and continuing education, improvement of sports and games facilities etc. Detalied information relating to

such programmes may be obtained separately either form the affiliating university or from the office of the Commission.

(G) Faculty Improvement Programme

(i) Teacher Fellowship :

With a view to providing opportunities to the teachers in colleges to keep themselves abreast with developments in their fields of study and research and to enhance their professionial competence the Commission will provide short-term teacher fellowships of one year duration each for enabling them to pursue M.Phil. courses. The earlier programme of awarding of long-term teacher fellowships for doing Ph.D. has been discontinued. However, a teacher who has done sufficient work relating to his Ph.D. degree and needs only one year time to complete the work could be considered for award of a short-term teacher felloship of one year duration.

This scheme will apply only to those colleges which will be eligible to receive development assistance during the Eighth Plan period. The number of fellowships to be awarded will be decided on the basis of peremanent teachers (or teachers appointed on regular basis in case of Government colleges) including the Principal but excluding the Physical Training Instructors/Director of Physical Education and the Librarian. Each college will have one short-term teacher fellowship of one year duration for every five permanent teachers (or teachers appointed on regular basis in case of Government Colleges) upto the age of 45 years (relaxable by 5 years in case of women teachers) with atlest 3 years of service and atleast 50% of marks at the Master's degree level will be considered for award of teacher fellowships. Selection of teachers for such awards will be made with the help of a Selection Committee to be constituted for the purpose. The awards will have to be approved by the Vice-Chancellor of the university to which the college is affiliated. The commission will only reimburse the expenditure.

The Commission will pay Living Expenses Allowances (LEA) @ Rs. 750/- per month, contingency grant limited to Rs. 5,000/- per annum for humanities, social sciences and commerce subjects/ Rs. 7,500/- per annum for science subjects including Mathematics, Statistics, Geography and Psychology and travelling allowance (TA) for joining the research centre and joining back the parent institution after completion of the tenure of award as per the college rates (by first class train/bus) in respect of a teacher selected for the award. However, the LEA and TA will only be paid if the distance between the centre of research and the parent institution of the teacher fellow is not less than 40 kms. (forty kilometers) and also if the centre of research and the parent institution do not belong to the same city.

The expenditure on teacher fellowship on actual basis as per the norms will be paid in addition to the allocation for which the college will be entitled as speified under (B)/ (C) and (D) above.

The detailed guideliines for teacher fellowship scheme during the Eighth Plan period have already been circulated to the universities separately (vide UGC office D.O. letter No. F. 9-1/90 (CPP), dated November 7, 1990).

(ii) Participation of Teachers in International Conferences Abroad

Proposals for participation of college teachers invited for presenting their papers in the International Conferences held outside India may be sent separately alongwith (a) 3 copies of the full text of the paper to be presented (not the extract of the paper); (b) a copy of the invitation letter to the participant by name; and (c) the source from which a part of the expenses are proposed to be met so as to reach the Commission's office atleast 60 (sixty) days before the date of the Conference for consideration by the Commission as per the procedure prescribed. The Commission will not provide assistance to a teacher who attends such Conference without its prior approval/sanction. a teacher will be eligible for assistance to attented an international conference abroad only once in a period of three years.

(ii) Participation in Refesher Courses, Workshops, Seminars etc.

Assistance will be provided to the college teachers to participate in refersher courses, seminars, symposia, workshops and summer institutes to be organised in India by universities and other institutions of higher learning with assistance from the Commission. Necessary details in this regard may be obtained from the university/institution concerned which organises such seminars etc.

(iv) Support for Research :

The Commission provides assistance to in-service teachers for undertaking minor or major research projects in humanities and social sciences, sciences, engineering and technology. Selection of teachers for assistance under this programme is made by the Commision on the basis of the recommendation of the panels/expert committees. Details and prescribed application form in this regard may either be obtained form the university or form the office of the Commission.

ANNEXURE

PROFORMA - A

UNIVERSITY GRANTS COMMISSION

Proposal of the multi-faculty/single faculty college for assistance from the University Grants Commission for general development of undergraduate education in the Eighth Plan (1990-95).

(please read the Guidlines carefully before filling in the proposal form)

Section 1. Basic information to determine the Eligibility of a college.

(Please indicate the enclosure number against the relevant column in all such cases where the required information has been given on a separate sheet of paper).

1. Name of the college with complete address with pin code and state _____

2. University to which affiliated _____

3. Date of Establishment of the College _____

4. Nature of Management Govt./Private/University

5. Nature of affiliation for degree courses.
   If temporary the date upto which affiliation has been granted.
   Temporary/Permanent

6. **Is thecollege approved under Section2(f)** **Yes/No**
   2 (f) and Section 12 (B) (if established 12 (B) **Yes/No**
   On or after 17th June, 1972) of the UGC Act.

7. Please indicate whether the college is a Women's College or is located in a backward area as identified by the University Grants Commission or is located in rural area at least 10 kilometer s outside the limites of Municipality, Corporation, Town or notified area cantonment or similar other Urban bodies indicating the actual distance of its location from limits of municiality etc.

8. Courses for which the affiliation has been granted by the University at undergraduate and post graduate levels.
   U.G._____
   P.G._____

3. Name od department in the college witn number of teachers in eacd department

deptt.	No of teachers
1.	
2.	
3.	
4.	
5.	
Total	_____
	_____

10. (a) Total number of permanent teachers (or teachers appointed on regular basis in case of Govt. Colleges) _____

(Details indicating the name, designation, qualifications, class/Division/grade obtained at the Master's degree level, dates of appointment and confirmation of each teacher to be given separately)

(b) Number of part-time teachers if any and the periods being taken by each of them per week with justification for employing them (separate sheet could be used for the purpose)

(c) No. of teachers form SC/ST category.

11. Student enrolment in PUC (or+2), if any, degree and Post-graduate courses as on 15th October of the preceding year or same year whichever is later.

	S. No	PUC Degree/PG Courses	Men	Women	Total	No. of SC/ST Students
	1.	2.	3.	4.	5.	6.
1.	PUC (or + 2)					
2.	B.A.					
3.	M.A.					
4.	B.Sc.					
5.	M.Sc.					
6.	B.Com.					
7.	M.Com.					
8.	Any other course					
	Total :					

12. Has the college received grants under the basic Assistance and Under-Graduate Development Schemes in earlier Plan period ? If so, give details about the present position of such grants scheme-wise.

Sl. No.	Scheme/ Project	Referenmce of approval (UGC letter No. & Date)	Total amount approved as UGC share	Amount received	Expdt. incurred upto 31.3.91	Remarks
1.	2.	3.	4.	5.	6.	7.
1.	Teacher Fellowship/FIP					
2.	Participation of teachers in academic conferences within India,					
3.	Books & Journals					
4.	Equipment					
5.	Building (Please give name of the buildings)					
6.	Staff					
7.	Other development schemes					
Total :						

13. Has the college received grants under other _____schemes of UGC such as COSIP/COHSSIP/ autonomous colleges/Research Support/restructuring of courses and other special programmes? If, yes, please give brief details and present position of utilisation etc.

Section 2. New Proposals for Development of Undergraduate Education (Arts, Science/Commerce/Single Faculty/Multy faculty colleges).

1. Ceiling of assistance upto which the college _____ is eligible as per Eighth Plan guidelines
2. Proposals for assistance required during Eighth Plan for development of under-graduate educationi.

S.No.	Item	Amount available as per guidelines	Amount proposed by the college	UGC share	Detailed justification (please attach Enclosures)
1.	2.	3.	4.	5.	6.
1.	Books & Journals				
2.	Equipment				
3.	Additional Teaching Staff				
4.	Additional Technical Staff Including professional staff for library				
5.	Remedial courses for weaker section of society				
6.	Extension programme				
7.	Examination reform				
8.	Participation of teachers in academic conference in India (Rs. 500/- per teacher subject) to a maximum of Rs. 10,000/-)				
9.	Buildings:				
	(i) Extension of claass-room/Labs.				
	(ii) Library buildings				
	(iii) Workshop shed/ animal house				
	(iv) Men's Hostel				
	(v) Women's Hostel				
	(vi) Staff Quarters/ teachers hostel				
	(vii) Improvement of facilities in the existing hostels .				
10.	Any other programme				
Total :					

N.B. The College should give details and justification for making each proposal on a separate sheet of paper. The facilities available at present, the extent to which they are being put to use and specific reasons for proposing further expansion may be indicated in the nmote. For building proposals, the college should also include a line/sketch plan and indicate total estimate cost inthe note. Extension of buildings would be considered only if the present accommodation is being put to maximum use for atleast 70 to 75% of working hours every day.

CERTIFICATE

It is certified that the proposals for development of undergraduate education have been formulated by the Planning Board of the college in which faculty members have been associated. The college has the necessary financial resources and managerial ability to meet the matching share as required and to complete the porjects approved by the Commission within the Eighth Plan period in accordance with the terms and conditions prescrtibed for the purpose and submit necessary statement of accounts and other documents including Utilisation Certificate as required by the commission. The assistance sougth from the Commission is not for purpose of fulfilling the conditions of affiliation laid down by the University:

It is also certified that the _____ College is affiliated to the University of _____and is included under Section 2 (f) list/and 12 (B) of the UGC Act and fulfils the eligibility conditions as laid down by the UGC in its quidelines and is, therefore, eligible to receive financial assistance for general development of undergraduate education as per UGC norms and the college undertakes to utilise the grants for the purpose for which they are sanctioned and would furnish all necessary documents as required in the conditions of grants laid down by the UGC.

Signature_____
Date _____

Principal
Seal

'Signature_____
(Registrar/Director College
Development Council)
Seal

CERTIFICATE

(Only for colleges catering to the needs of SC/ST students)

It is certified that _____college is catering to the needs of Scheduled Caste and Scheduled Tribe students and has the required number of students belonging to SC/St in the degree classes and fulfils the conditions laid down for receiving UGC assistance under this programme. The eucational developments proposed by the college are such as would help the SC/St students in their higher education. The college has the necessary motivation and managerial ability to successfully implement the development programmes, as per conditions laid down and submit all necessary accounts, documents etc. as may be required by the UGC.

Place :
Date:

Principal_____
Registrar_____
Director (CDC)

Seal

PROFORMA - B

UNIVERSITY GRANTS COMMISSION

Proposals for Assistance for Development of Post-graduate Courses in the College in Eighth Plan Period (1990-95).

(Please read the guidelines carefully before filling in the proposal form. Proposals should be made only in respect of department eligible, as per norms indicated).

SECTION - I

1. Name of the college with complete addrss with Pin-code and State
2. University to which affiliated
3. Date of establishment and whether included as a college teaching upto Post Graduate Degree iin 2 (f) list of UGC and/or under 12 (B) if established on or after 17.6.1972.
4. Nature of management Govt./Private/university
5. Has the college fulfilled the prescribed conditions of affiliation of Post-graduate courses?
6. Names of departments in the college offering Postgraduates courses and those departments which fulfil the norms prescribed by UGC.

SECTION -2

Information relating to the department for which development assistance is proposed. Separate sheet is to be given for each such department.

1. Name of the Department.
2. Year from which Postgraduate Courses were started.
3. Total number of students in 2 years of MA/M.Sc./M.Com. as on 15th October of the preceding year of the same year whichevr is later .
4. Total number of teachers in the department.
   (i) with Ph.D degree only
   (ii) with M.Phil. degree only
   (iii) with Master's degree only
5. Number of journals subscribed with titles and amount of subscription per annum.
6. Details of major research projects undertaken by faculty members in the department giving details such as sponsoring agency, funds, duration etc. (Minor Research Projects will not be taken into account.)
7. Details of research publications by the staff in past 3 years giving details such as titles of the research papers, journals in which published/accepted for publicstion; year of publication etc.

SECTION -3

1. Details of assistance received in the seventh plan period for various items.

item	Amount approved as UGC share	Amount received	Expenditure upto 31.3.91	Remarks

2. Proposal for assistance required during the Eighth Plan period

item	Amount proposed by the College	UGC share	college/State Govt. share	Detailed justification (p1. attach encl.)

Total :

SECTION -4

CERTIFICATE

It is certified that the _____College is affiliatd to the University of _____ and is included under Section 2 (f) list/and 12 (B) of the UGC Act and fulfils the eligibility conditions as laid down by the UGC iin its guidelines and is, therefore, eligible to receive financial assistance for development of Postgraduate courses as per UGC norms and the college undertakes to utilise the grants for the purposes for which they are sanctioned and would furnish all necessary documents as required in the conditions of grants by the UGC.

It is also certified that the college has the necessary resources and managerial ability to implement the programme to be approved by the UGC in accordance with the conditions prescribed. The development programmes would help in improvement of standards of Postgraduate education in the college.

Place and Date :

Head of department
Principlal of the College
Director CDC/Registrar
of the University

UNIVERSITY GRANTS COMMISSION

PROFORMA - C

Information relating to the Award of Teacher Felloships during the Seventh Plan period under the Schemes of Basis Assistance, Undergraduate Development and Postgraduate Development to be furnished separately schemewise and to be sent alongwith the Eighth Plan Development proposals .

Name of the Teacher Fellow	Date of joining the research centre	Duration of the Award	Expenditure towards the Living Expenses Allowance and Contigency of the teacher fellow and salary of the substitute, if appointed.	
			upto 31.3.91	After 31.3.91
1.				
2.				
3.				
4.				
5.				

Name of the College----------
Name of the University to
which the college is affiliated----------

Signature
Principal
Seal

APPENDIX -XXVIII

Statement Showing the Grants Paid to the Colleges during the Year 1990-91 (Major Head Wise) Under Plan

(Rs. In Lakhs)

Sl. No. University	Name of the linkage between diff. Sector	Development for quality impromentof Education	Schemes for quality Improvement of research	Programme to Reduce disparities	Programme for improve-of manage-ment	Totall	Engg. & Tech.	Total		Grand Total
Central University	Sector A	Sector B	Sector C	Sector D	Sector E		Sector F		Section III	
1 2	3	4	5	6	7	8	9	10	11	12
1. Banaras	-	1.00	-	-	-	1.00	-	1.00	-	1.00
2. Delhi	23.96	267.13	20.18	12.00	-	323.27	-	323.27	1.81	325.08
3. N.E.H.U.	-	0.37	0.03	0.50	-	0.90	-	0.90	4.05	4.95
4. Pondicherry	-	0.12	1.59	-	-	1.71	-	1.71	-	1.71
TOTAL	23.96	268.62	21.80	12.50	-	326.88	-	326.88	5.86	332.74
ANDHRA										
1. Andhra	3.00	25.52	5.96	0.30	19.02	53.80	2.51	56.31	5.23	61.54
2. Kakatiya	-	6.64	2.44	0.20	*0.87	*0.87		*0.87		*0.87
					-	9.28	-	9.28	0.75	10.03
3. Nagarjuna	1.00	32.36	4.47	0.20	2.00	40.03	-	40.03	-	40.03
4. Osmania	2.55	41.91	2.83	0.60	-	47.89	-	47.89	-	47.89
5. Sri Krishna Devaraya	-	7.54	1.25	0.10	-	8.89	-	8.89	-	8.89
6. Sri Venkteswara	-	14.76	4.30	-	-	19.06	-	19.06	-	19.06
TOTAL	6.55	128.73	21.25	1.40	21.02	178.95	2.51	181.46	5.98	187.44
					*0.87	*0.87		*0.87		*0.87

* By Adjustment

APPENDIX - XXVIII (Cond,)

1	2	3	4	5	6	7	8	9	10	11	12
ASSAM											
1.	Dibrugarh	-	24.31	4.50	2.65	-	31.46	-	31.46	0.25	31.71
2.	Gauhati	-	18.22	3.52	3.30	-	25.04	-	25.04	-	25.04
			*0.50				*0.50		*0.50		*0.50
TOTAL		-	42.53	8.02	5.95	-	56.50	-	56.50	0.25	31.71
		-	*0.50				*0.50		*0.50		*0.50
ARUNACHAL											
1.	Arunachal	-	-	0.10	0.10	-	0.20	-	0.20	-	0.20
BIHAR											
1.	Bhagalpur	-	26.63	3.96	-	-	30.59	-	30.59	-	30.59
2.	Bihar	0.42	29.76	5.93	0.80	-	36.91	-	36.91	1.05	37.96
3.	L.N. Mithila	-	31.53	3.38	-	-	34.91	-	34.91	1.20	36.11
4.	Magadh	-	72.51	6.47	2.30	-	81.28	-	81.28	3.59	84.87
5.	Patna	-	3.27	0.63	-	-	3.90	-	3.90	-	3.90
6.	Ranchi	-	63.92	8.66	0.10	-	72.68	-	72.68	0.10	72.78
TOTAL		0.42	227.62	29.03	3.20	-	260.27	-	260.27	5.94	266.21
GUJARAT											
1.	Bhavnagar	-	0.10	-	0.25	-	0.35	-	0.35	32.11	32.46
2.	Gujarat	-	29.62	9.47	-	-	39.09	-	39.09	-	39.09
3.	Sardar Patel	-	3.36	0.09	0.13	-	3.58	0.11	3.69	1.85	5.54
4.	Saurashtra	-	2.46	0.03	-	-	2.49	-	2.49	-	2.49
5.	South Gujarat	0.02	12.69	0.03	-0.10	-	12.84	-	12.84	-	12.84
6.	North Gujarat	-	16.58	-	0.50	-	17.08	-	17.08	-	17.08
TOTAL		0.02	64.81	9.62	0.98	-	75.43	0.11	75.54	33.96	109.50

* By Adjustment

APPENDIX - XXVIII (Cond,)

1	2	3	4	5	6	7	8	9	10	11	12
GOA											
1.	Goa		6.28	-	-	-	6.28	-	6.28	-	6.28
HARYANA											
1.	Kurukshetra	3.38 *0.06	47.84	3.90	-	-	55.12 *0.06	0.08	55.20 *0.06	8.11	63.31 *0.06
2.	M.D. Univ.	-	21.72	5.18	-	-	26.90	-	26.90	1.25	28.15
	TOTAL	3.38 *0.06	69.56	9.08-		-	82.02 *0.06	0.08	82.10 *0.06	9.36	91.46 *0.06
HIMACHAL PRADESH											
1.	H.P. Univ.	-	9.78	6.74	-	0.06	16.58	-	16.58	2.77	19.35
2.	H.P. Krishi	-	-	0.04	-	-	0.04	-	0.04	-	0.04
	TOTAL	-	9.78	6.78	-	0.06	16.62	-	16.62	2.77	19.39
JAMMU AND KASHMIR											
1.	Jammu	-	7.18 *0.15	2.50	-	-	9.68 *0.15	-	9.68 *0.15	-	9.68 *0.15
2.	Kashmir	-	1.00	0.17	-	-	1.17	-	1.17	-	1.17
	TOTAL	-	8.18 *0.15	2.67	-	-	10.85 *0.15	-	10.85 *0.15	-	10.85 *0.15

* By Adjustment

APPENDIX - XXVIII (Cond,)

1	2	3	4	5	6	7	8	9	10	11	12
KARNATAKA											
1.	Bangalore	-	6.64	1.56	0.02	-	68.22	-	68.22	4.64	72.86
			*0.61				*0.61		*0.61		*0.61
2.	Gulbarga	2.00	25.37	3.92	0.15	-	31.44	-	31.44	-	31.44
3.	Karnataka	-	25.54	3.50	1.05	-	30.09	-	30.09	6.67	36.76
4.	Mangalore	-	12.98	0.96	0.03	-	13.97	-	13.97	2.62	16.59
5.	Mysore	0.50	8.74	-	0.85	-	10.09	-	10.09	1.50	11.59
6.	Kuvempu	-	7.35	-	0.10	-	7.45	-	7.45	-	7.45
	TOTAL	2.50	146.62	9.94	2.20	-	161.26	-	161.26	15.43	176.69
			*0.61				*0.61		*0.61		*0.61
KERALA											
1.	Calicut	-	35.85	10.89	3.37	-	50.11	-	50.11	2.50	52.61
2.	Gandhi University	-	55.07	5.43	-	-	60.50	-	60.50	1.30	61.80
3.	Kerala	0.50	26.77	13.87	-	-	41.14	-	41.14	-	41.14
	TOTAL	0.50	117.69	30.19	3.37	-	151.75	-	151.75	3.80	155.55
MADHYA PRADESH											
1.	A.P.Singh	-	2.92	0.64	-	-	3.56	-	3.56	-	3.56
2.	Bhopal	-	11.70	2.82	0.40	-	14.92	-	14.92	2.25	17.17
3.	Devi Ahilya	0.60	3.29	2.60	-	-	6.49	-	6.49	2.08	8.57
4.	Dr H.S. Gaur	-	14.21	0.27	0.50	-	14.98	-	14.98	2.20	17.18
5.	Guru Ghasidas	-	3.14	0.39	-	3.00	6.53	-	6.53	-	6.53
6.	Jiwaji	-	3.48	2.74	0.62	-	6.84	-	6.84	2.65.	9.49
7.	Indra Kala Sangeet	-	1.04	-	-	-	1.64	-	1.64	-	1.64
8.	Rani Durgawati	-	2.39	0.37	0.40	-	3.16	-	3.16	-	3.16
9.	Ravishanker	-	9.87	0.17	0.30	2.00	12.34	-	12.34	2.31	14.65
10.	Vikram	-	5.63	0.32	0.30	-	6.25	-	6.25	2.67	8.92
	TOTAL	0.60	58.27	10.32	2.52	5.00	76.71	-	76.71	14.16	90.87

* By Adjustment

* By Adjustment

APPENDIX - XXVIII (Cond,)

1	2	3	4	5	6	7	8	9	10	11	12
MAHARASHTRA											
1.	Amravati	-	41.98	0.19	0.50	-	42.67	-	42.67	-	42.67
2.	Bombay	-	24.73	4.61	-	-	29.34	-	29.34	5.14	34.48
3.	Marathwada	0.79	49.50	4.94	1.24	-	56.47	-	56.47	17.92	74.39
4.	Nagpur	1.00	41.91	1.71	2.87	-	47.49	-	47.49	12.74	60.23
5.	Poona	3.00	98.74	15.38	0.57	-	117.69	-	117.69	31.96	149.65
			*0.20				*0.20		*0.20		*0.20
6.	S.N.D.T. Women's	-	1.95	-	-	-	1.95	-	1.95	-	1.95
7.	Shivaji	-	36.81	4.95	0.70	-	42.46	-	42.46	9.99	52.45
			*0.06				*0.06		*0.06		*0.06
	TOTAL	4.79	295.62	31.78	5.88	-	338.07	-	338.07	77.75	415.82
			*0.26				*0.26		*0.26		*0.26
MANIPUR											
1.	Manipur	-	9.39	0.47	0.50	-	10.36	-	10.36	-	10.36
ORISSA											
1.	Berhampur	1.00	11.30	1.35	-	-	13.65	-	13.65	0.77	14.42
2.	Sambalpur	-	10.91	1.00	-	-	11.91	-	11.91	-	11.91
3.	Utkal	-	31.90	6.54	0.10	5.00	43.54	-	43.54	2.95	46.49
	TOTAL	1.00	54.11	8.89	0.10	5.00	69.10	-	69.10	3.72	72.82
PUNJAB											
1.	Guru Nanak Dev Univ.	0.55	49.82	9.50	2.00	-	61.87	-	61.87	8.66	70.53
2.	Panjab	-	40.80	16.27	0.89	-	57.96	0.24	58.20	10.17	68.37
			*0.07				*0.07		*0.07		*0.07
3.	Punjabi	0.70	28.43	1.35	0.05	-	30.53	-	30.53	3.17	33.70
	TOTAL	1.25	119.05	27.12	2.94	-	150.36	0.24	150.60	22.00	172.60
			*0.07				*0.07		*0.07		*0.07

* By Adjustment

APPENDIX - XXVIII (Cond,)

1	2	3	4	5	6	7	8	9	10	11	12
RAJASTHAN											
1.	Ajmer	1.15	15.11	1.03	0.29	-	17.58	-	17.58	1.25	18.83
2.	Jodhpur	0.57	3.38	0.06	2.00	-	6.01	-	6.01		6.01
3.	Rajasthan	0.90	42.82	9.51	0.21	-	53.44	0.12	53.56	0.66	54.22
4.	M.L. Sukhadia	-	-	0.07	0.10	-	0.17	-	0.17	-	0.17
	TOTAL	2.62	61.31	10.67	2.60	-	77.20	0.12	77.32	1.91	79.23
TRIPURA											
1.	Tripura	-	1.50	0.03	0.20	-	1.73	-	1.73	-	1.73
TAMILNADU											
1.	Bharathiar	-	7.43	2.15	-	2.26	11.84	-	11.84	8.43	20.27
2.	Bharathidasan	-	18.93	4.81	-	-	23.74	-	23.74	8.26	32.10
3.	Madras	-	94.03	11.96	0.80	20.95	127.74	-	127.74	13.66	141.40
			*0.92				*0.92		*0.92		*0.92
4.	Madurai Kamraj	0.18	64.00	8.51	1.12	2.46	76.27	-	76.27	36.13	112.40
	TOTAL	0.18	184.39	27.43	1.92	25.67	239.59	-	239.59	66.58	306.17
			*0.92				*0.92		*0.92		*0.92
UTTAR PRADESH											
1.	Agra	-	42.45	13.39	-	-	55.84	-	55.84	5.28	61.12
2.	Allahabad	-	11.08	0.18	0.53	-	11.79	-	11.79	2.25	14.04
3.	Avadh	6.23	28.15	4.04	0.55	-	38.97	-	38.97	1.08	40.05
			*0.01				*0.01		*0.01		*0.01
4.	Bundelkhand	1.00	18.45	1.13	0.15	-	20.73	-	20.73	3.00	23.73
5.	Garhwal	-	12.61	5.19	0.10	-	17.90	-	17.90	-	17.90
6.	Gorakhpur	-	67.86	23.22	0.30	-	91.38	-	91.38	-	91.38
7.	Kanpur	0.70	64.83	12.35	1.93	-	79.81	3.28	83.09	12.74	95.83
8.	Kumaon	-	9.74	2.27	-	-	12.01	-	12.01	0.20	12.21
9.	Lucknow	-	7.92	1.43	-	-	9.35	-	9.35	-	9.35
10.	Meerut	0.40	63.29	15.85	0.55	-	80.09	-	80.09	8.36	88.45

* By Adjustment

APPENDIX - XXVIII (Cond,)

1	2	3	4	5	6	7	8	9	10	11	12
UTTAR PRADESH (Cond.)											
11.	Rohilkhand	-	18.31	7.40	0.70	-	26.41	-	26.41	1.81	28.22
12.	Purvanchal	-	-	-	-	-	-	-	-	7.38	7.38
	TOTAL	8.33	344.69	86.45	4.81	-	444.28	3.28	447.56	42.10	489.66
			*0.01				*0.01		*0.01		*0.01
WEST BENGAL											
1.	Burdwan	2.90	42.03	3.49	2.30	-	50.72	-	50.72	2.98	53.70
			*1.25				*1.25		*1.25		*1.25
2.	Calcutta	-	64.18	37.66	1.47	-	103.31	0.14	103.45	3.79	107.24
			*0.34				*0.34		*0.34		*0.34
3.	Kalyani	-	0.30	0.13	0.10	-	0.53	-	0.53	-	0.53
4.	North-Bengal	-	8.39	0.73	0.20	-	9,32	-	9.32	4.38	13.70
5.	Vidya Sagar	-	14.05	2.57	0.60	-	17.22	-	17.22	0.75	17.97
	TOTAL	2.90	128.95	44.58	4.67	-	181.10	0.14	181.24	11.90	193.14
			*1.59				*1.59		*1.59		*1.59
	GRAND TOTAL	59.00	2347.70	396.22	55.84	56.75	2915.51	6.48	2921.99	323.47	3245.46
		*0.06	*4.11			*0.87	*5.04		*5.04		*5.04

APPENDIX-XXIX

Statement Showing Maintenance Grants (Non-Plan) and Recurring Expenditure (Non-Plan) in Respect of Central Universities, Institutions Deemed to be Universities and State Universities for the Year 1988-89

(A) CENTRAL UNIVERSITIES:-

Sl. No.	State/ University	Non-Plan Maintenance Grants From UG.C.	Total Non-Plan Recurring Expenditure
(1)	(2)	(3)	(4)
ANDHRA PRADESH			
1.	Hyderabad	489.01	485.44
DELHI (U.T.)			
2.	Delhi	1,889.25	1,980.98
3.	Indira Gandhi National Open	0.00	0.00
4.	Jawahar Lal Nehru	1,023.84	1,066.73
MEGHALAYA			
5.	North Eastern Hill	843.00	904.00
PONDICHERRY (U.T.)			
6.	Pondicherry	0.00	0.00
UTTAR PRADESH			
7.	Aligarh Muslim	2,748.06	2,994.00
8.	Banaras Hindu	3,394.04	4,093.76
WEST BENGAL			
9.	Visva Bharati	773.40	771.68

APPENDIX-XXIX (Contd.)

(B) INSTITUTIONS DEEMED TO BE UNIVERSITIES:-

Sl. No.	State/Deemed University	Non-Plan Maintenance Grants From UG.C.	Total Non-Plan Recurring Expenditure
(1)	(2)	(3)	(4)
ANDHRA PRADESH			
1.	Central Inst. of Eng. & Foreign Language	151.40	158.14
2.	Sri Sathya Sai Instt. of Higher Learning	0.00	42.64
BIHAR			
3.	Birla Institute of Technology, Mesra	0.00	0.00
4.	Indian Institute of Mines	367.40	365.16
DELHI (U.T.)			
5.	School of Planning and Architecture	0.00	127.87
KARNATAKA			
6.	Indian Instt. of Science	1,319.06	1,651.61
MAHARASHTRA			
7.	International Instt. for Population Scs.	0.00	45.03
8.	Tata Institute of Social Sciences	132.50	143.65
9.	Tilak Maharashtra Vidyapeeth	0.00	27.57
PUNJAB			
10.	Thapar Institute of Engg. & Tech.	0.00	147.58
RAJASTHAN			
11.	Banasthali Vidyapith	0.00	117.51
TAMILNADU			
12.	Gandhigram Rural Institute	113.99	117.85
UTTAR PRADESH			
13.	Central Instt. of Higher Tibietan Sty.	0.00	62.21
14.	Dayalbagh Edu. Institute	26.00	122.85

APPENDIX-XXIX (Contd.)

(C) STATE UNIVERSITIES:-

Sl. No.	State/ University	Non-Plan Maintenance Grants From State Govt..	Total Non-Plan Recurring Expenditure
(1)	(2)	(3)	(4)
ANDHRA PRADESH			
1.	Osmania	1,483.91	1,374.48
2.	Sri Padmavati Mahila	58.17	50.93
3.	University of Health Sciences	1.56	35.52
ARUNACHAL PRADESH			
4.	Arunachal	0.00	0.00
ASSAM			
5.	Dibrugarh	136.80	256.39
GOA			
6.	Goa	10.00	33.03
GUJARAT			
7.	North Gujarat	0.00	0.00
8.	Sardar Patel	194.97	255.55
9.	Saurashtra	220.13	338.70
HARYANA			
10.	Kurukshetra	751.98	939.07
11.	Maharshi Dayanand	433.54	521.71
HIMACHAL PRADESH			
12.	Himachal Pradesh	849.63	339.25
JAMMU AND KASHMIR			
13.	Jammu	294.50	359.55
KARNATAKA			
14.	Bangalore	712.43	799.98
15.	Karnataka	734.31	892.39
16.	Mangalore	172.76	232.03
KERALA			
17.	Cochin	208.26	253.05
18.	Kerala	411.05	963.48
MADHYA PRADESH			
19.	Barkatullah (Bhopal)	0.00	0.00
20.	Devi Ahilya	141.92	272.14
21.	Dr. H.S. Gour	213.23	476.47
22.	Rani Durgavati	138.24	245.87
23.	Ravi Shankar	109.78	220.65
24.	Vikram	152.77	278.91
MAHARASHTRA			
25.	Amravati	46.18	115.08
26.	Marathwada	296.61	511.86
27.	Nagpur	373.35	613.38
28.	Poona	439.91	945.50
29.	S.N.D.T. Women's	220.85	510.69
MANIPUR			
30.	Manipur	150.00	229.91
ORISSA			
31.	Berhampur	157.50	244.62
32.	Sambalpur	159.50	229.21
PUNJAB			
33.	Guru Nanak Dev	550.88	739.85
34.	Panjab	1,457.50	1,672.00
35.	Punjabi	1,060.04	775.18

APPENDIX-XXIX (Contd.)

(C) STATE UNIVERSITIES:-

Sl. No.	State/Deemed University	Non-Plan Maintenance Grants From State Govt.	Total Non-Plan Recurring Expenditure
(1)	(2)	(3)	(4)
RAJASTHAN			
36.	Mohan Lal Sukhadia	307.81	328.62
TAMILNADU			
37.	Alagappa	95.88	47.33
38.	Bharathiar	60.75	164.78
39.	Bharathidasan	62.65	191.65
40.	Madras	96.51	705.47
41.	Mother Teresa Women's	40.08	36.15
TRIPURA			
42.	Tripura	43.00	35.07
UTTAR PRADESH			
43.	H.N. Bahuguna (Garhwal)	87.74	241.76
44.	Kashi Vidyapith	89.17	147.01
45.	Kumaun	150.13	387.59
46.	Rohilkhand	0.00	0.00
47.	Sampurnanand Sanskrit	92.74	205.06
WEST BENGAL			
48.	Burdwan	553.71	592.13
49.	Jadavpur	870.86	921.79
50.	North Bengal	378.68	383.78
51.	Rabindra Bharati	200.86	222.84
52.	Vidya Sagar	33.42	33.88

NOTE:-

1. In the case of Central Universities and Institutions Deemed to be Universities, the maintenance grants paid by the University Grants Commission & the expenditure as reported by the Universities has been shown. In respect of State Universities, the figures given in this appendix are based on the information received from different state Universities.

2. Only the maintenance grants received by the Universities from either the University Grants Commission or State Governments as the case may be and the total recurring expenditure (Non-Plan) has been given. Funds received by the Universities from sources other than State Governments (for state universities) and University Grants Commission (for Central universities) and Institutions deemed to be universities have not been shown.

3. Recurring expenditure (Non-Plan) includes only items like salaries of teaching staff, administrative staff, purchse of chemicals, maintenance of equipment, conduct of examination, maintenance of buildings and other expenditure on day to day activities.

APPENDIX - XX X

Details of Foreign Tours undertaken by the Chairman/Vice-Chairman and Officers of the Commission during the year 1990-91

Name and Designation of the Officers	Name of the Country visited	From	To	Purpose	Remarks
Prof. Yashpal Chairman	i) USA	21.4.90	28.4.90	To attend Mercony International Fellowship Symposium and awards	Expenditure met by the U.G.C
	ii) Hongkong	7.4.90	10.4.90	To attend the UNCSTD meeting	Expenditure met by UNCSTD and UGC
	iii) Paris	9.5.90	12.5.90	UNU Joint Project meeting	Expenditure met by UNU and UGC
Prof. S.K. Khanna Secretary	Moscow	18.6.90	23.6.90	Indian delegation to Moscow for India-USSR Joint Commission Meeting on Book Production	Expenditure met by Ministry of HRD
Dr. S.P. Gupta Adl. Secretary	USA	27.10.90	19.11.90	In connection with the programme of post secondary educational linkage	Expenditure met by USIS and UGC
Sri D.P. Hira Adl. Secretary	Sri Lanka	1.6.90	7.6.90	Selection of Sri Lankan students for admission for fellowship in India	Expenditure met by UGC

APPENDIX-XXXI
COURSE-WISE, SEX-WISE ENROLMENT IN CORRESPONDENCE/DISTANCE EDUCATION SYSTEM DURING 1990-91.

STATE/UNIVERSITY	COURSE	ENROLMENT MEN	ENROLMENT WOMEN	TOTAL
(1)	(2)	(3)	(4)	(5)
ANDHRA PRADESH				
Andhra				
	1. Introductory Courses	430	183	613
	2. B.A.	17097	10873	27970
	3. B. Com.	3268	802	4070
	4. B. Sc.	511	39	550
	5. B.Ed.	270	130	400
	6. M. A.	2506	2637	5143
	7. M. Com.	824	511	1335
	8. M.Ed.	80	20	100
	9. P. G. Dip. in Co-operatioin & Rural Studies	94	6	100
	10. P. G .Dip. in Environmental Science	90	10	100
	11. P. G. Dip. in Translation	40	30	70
	12. P. G. Dip. in Functional English	40	20	60
Andhra Pradesh Open				
	1. B. A.	8007	5715	13722
	2. B. Com	4261	315	4576
	3. B. Sc.	7698	1450	9148
	4. B. Lib. & Infn. Science	305	146	451
	5. P. G. Dip. in Public Accounts	289	52	341
	6. P. G. Dip. in Public Relation	705	103	808
	7. Cert. in Food & Nutrition	297	199	496
Jawaharlal Nehru Tech.				
	1. B. Tech.	1236	54	1290
	2. M. B.A.	30	0	30
	3. M. Sc.	24	0	24
	4. M. Tech.	370	9	379
	5. M. Arch.	16	0	16
Kakatiya				
	1. B. A.	37	14	51
	2. B. Ed.	176	47	223
	3. B.G.L.		- NOT AVAILABLE -	
	4. B.Lib. & Infn. Science	52	23	75

(1)	(2)	(3)	(4)	(5)
Kakatiya (Contd.)				
	5. M. A.	366	154	520
	6. M. Com.	143	20	163
	7. M. Sc.	160	16	76
	8. M. Phil. (Arts)	64	28	92
	9. P. G. Dip. in Business Management	27	3	30
	10. Dip. in Personnel Mngt. & Indl. Relation	195	10	205
	11. Dip. in Computer Application	19	1	20
	12. Dip. in Rural Banking & Co-operation	14	0	14
	13. Dip. in Rural Development	11	0	11
	14. Cert.. in Library & Infn. Science	75	13	88
Osmania				
	1. B. A. (Hons.)	121	290	411
	2. B. Com.	325	363	688
	3. B. Ed.	400	211	611
	4. M. A.	846	588	1434
	5. M. Com.	755	467	1222
	6. M. Sc.	1375	345	1720
	7. M. Ed.	81	20	101
	8. P. G. Dip. in Mathematics	62	42	104
Sri Venkateswara				
	1. B. A. (Hons.)	37	18	55
	2. B. Com.	11	11	22
	3. B. Ed.	289	109	398
	4. M. A.	320	113	433
	5. M. Com.	136	29	165
	6. M. Sc.	136	82	218
	7. Dip. in Personnel Mngt. & Indl. Relation	329	34	363
	8. Dip. in Public Admiinistration	7	1	8
	9. Dip. in (Senior) in Linguistics	12	5	17
	10. Dip. (Junior) in Linguistics	5	9	14
	11. Cert. in Infn. System through COBOL	38	7	45
	12. Cert. in Scientific Application through FORTRAN	38	8	46
	13. Cert. in Word Processing & Data Management	46	3	49
	14. Cert. in Library Seicnce	461	103	564

(1)	(2)	(3)	(4)	(5)
Cn. Instt. of Eng. & Frn. Lang.*				
	1. M. A.	4	12	16
	2. P. G. Dip. in Teaching of English	122	100	222
	3. Cert. (P. G.) in Teaching of English	494	387	881
BIHAR				
Patna				
	1. Inter (Arts)	1110	414	1524
	2. Inter (Com.)	388	14	402
	3. B. A.	1779	485	2264
	4. B. A. (Hons.)	556	107	663
	5. B. Com.	678	8	686
	6. B. Com. (Hons.)	85	8	93
GUJARAT				
Gujarat Vidyapith*				
	1. M. A.	41	9	50
	2. M. Ed.	121	19	140
HARYANA				
Kurukshetra				
	1. Pre-Degree	822	820	1642
	2. B. A.	838	146	984
	3. M. Com.	133	81	214
	4. P. G. Dip. in Tourism & Hotel Management	173	18	191
Maharshi Dayanand				
	1. B. Ed.	5964	15399	21363
HIMACHAL PRADESH				
Himachal Pradesh				
	1. Class (XI & XII)	61	15	76
	2. B. A.	722	56	778
	3. M. A.	5482	3017	8499
	4. M. Com.	2352	975	3327
	5. M. Ed.	1885	879	2764
JAMMU & KASHMIR				
Jammu				
	1. B. A.	25	15	40
	2. B. Com.	12	1	13
	3. B. Ed.	324	157	481

(1)	(2)	(3)	(4)	(5)
JAMMU & KASHMIR (Contd.)				
Jammu (Contd.)				
	4. LL. B.	295	32	327
	5. M. Com.	72	99	171.
	6. Cert. in Urdu	7	2	9
	7. Cert. in English Improvement	15	7	22
Kashmir				
	1. Pre-Degree		- NOT AVAILABLE-	
	2. B. A.		- NOT AVAILABLE-	
	3. B. Com.		- NOT AVAILABLE-	
	4. B. Ed.	185	109	294
	5. LL. B.		- NOT AVAILABLE-	
	6. M. A.		- NOT AVAILABLE-	
	7. M. Com.		- NOT AVAILABLE-	
	8. Cert.. in Hindi		- NOT AVAILABLE-	
	9. Ceret. in Urdu		- NOT AVAILABLE-	
	10. Cert. in Kashmiri		- NOT AVAILABLE-	
	11. Cert. in Library & Infn. Science		- NOT AVAILABLE-	
KARNATAKA				
Bangalore				
	1. B. A.	902	0	902
	2. B. Com.	389	0	389
	3. M. A.	1061	0	1061
	4. M. Com.	435	0	435
Mysore				
	1. B. A.	3284	1721	5005
	2. B. Com.	514	232	746
	3. B. Ed.	324	176	500
	4. M. A.	5669	2955	8624
	5. M. Com.	747	303	1050
	6. P. G. Dip. in Marketing Managment	202	88	290
	7. P. G. Dip. in Business Taxation	62	8	70
	8. P. G. Dip. in English	58	17	75
	9. Dip. in Journalism	165	40	205
	10. Dip. (Post P.U.C.) in Kannada	46	22	68
	11. Dip. in Sanskrit	3	1	4

(1)	(2)	(3)	(4)	(5)
Mysore (CONTD.)				
	12. Cert. in Kannada	32	16	48
	13. B. A. (Open University System)	4853	2384	7237
	14. B. Com.(Open University System)	528	107	635
	15. M. A. (Open University System)	5111	1487	6598
	16. M. Com. (Open University System)	275	43	318
KERALA				
Calicut				
	1. Pre-Degree	61	30	91
	2. B. A.	1780	800	2580
	3. B. Com.	849	320	1169
	4. M. A.	218	145	363
	5. B. A. (Open University System)	250	112	362
	6. B. Com. (Open University System)	43	45	88
Kerala				
	1. Pre-Degree	169	21	190
	2. B. A.	295	192	487
	3. B. Com.	139	14	153
	4. M. A.	1160	837	1997
	5. M. Com.	277	113	390
MADHYA PRADESH				
Barkatullla				
	1. B. A.	38	23	61
	2. B. Com.	15	5	20
	3. B. Ed.	4265	3425	7690
MAHARASHTRA				
Bombay				
	1. B. A.	1917	1873	3790
	2. B. Com.	2064	1117	3181
	3. M. A..	1320	2409	3729
	4. M. Com.	2018	1989	4007
	5. M. Sc.	190	113	303
	6. Dip. in Financial Management	266	59	325
	7. Dip. in Operational Research	48	9	57

(1)	(2)	(3)	(4)	(5)
Poona				
	1. B.A.	47	48	95
	2. B. Com.	82	103	185
S.N.D.T. Women's				
	1. B. A.	0	8542	8542
	2. B. Com.	0	551	551
	3. Cert.. in Basics of Diet Therapy	0	3	3
	4. Cert. in Women & Law	0	70	70
	5. Cert. in English Improvement	0	76	76
	6. Cert. in Techniques of Translation	0	3	3
	7. Cert. in Family Saving & Investment	0	29	29
	8. Cert. in Entrance Test	0	3122	3122
Tilak Maharashtra*				
	1. B.A.	2707	1182	3889
Yashwantrao Chavan Open				
	1. B.A./B. Com. Preparatory	4200	800	5000
	2. B. A./B. Com. Foundation	2384	116	2500
	3. Cert.in Agriculture	80	1	81
ORISSA				
Berhampur				
	1. B. Ed.	510	218	728
Utkal				
	1. Pre-Degree (Arts)	3336	1341	4677
	2. Pre-Degree (Com.)	197	10	207
	3. B. A.	1695	520	2215
	4. B. Com.	78	12	90
	5. B. Ed.	800	300	100
PUNJAB				
Panjab				
	1. B. A.	1857	570	2427
	2. B. Com.	458	117	575
	3. M. A.	1242	1352	2594
	4. Dip. in Statictics	32	21	53
	5. Dip. in Office Organisation & Procedures	62	15	77
	6. Dip. in Population Education	16	10	26

(1)	(2)	(3)	(4)	(5)
PUNJABI (CONTD.)				
	1. B. A.	931	314	1245
	2. B. Com.	120	6	126
	3. B. Ed.	142	108	250
	4. M.A.	1447	1258	2705
	5. M.B.A.	52	0	52
	6. M. Ed.	118	182	300
	7. M. Phil. (Arts)	23	57	80
	8. P. G. Dip. in Mangt. of Public Enterprises	98	12	110
	9. P. G. Dip. in Public Relation & Advertising	94	29	123
	10. P. G. Dip. in Business Management	176	2	178
	11. Dp. in Financial Management	56.	1	57
	12. Dip. in Marketing Management	124	0	124
	13. Dip. in Material Management	184	3	187
	14. Dip. in Project Management	36	1	37
	15. Dip. in Production Management	45	1	46
	16. Dip. in Personnel Mngt. & Indl. Relation	177	7	184
	17. Dip. in Library Science	450	0	450
	18. Dip. in Divinity	100	28	128
	19. Cert. in Punjabi Praveshika	4	5	9
	20. Gyani	86	80	166
RAJASTHAN				
Kota Open				
	1. B. A. Preparatory	2120	150	2270
	2. B. A. Foundation	162	60	222
	3. B. Com. Preparatory	252	20	272
	4. B. Com,. Foundation	77	10	87
	5. B.Ed.	3851	795	4646
	6. B. A.	560	45	605
	7. B. Com.	58	0	58
	8. B. I.M.C.	522	160	682
	9. M. A.		- NOT AVAILABLE-	
	10. M. Com.		-NOT AVAILABLE-	
	11. P. G. Dip. in Labour Law, Indl. Reln. & Pres. Management	465	18	483
	12. Dip. in Management	643	21	664

(1)	(2)	(3)	(4)	(5)
RAJASTHAN (CONTD.)				
Kota Open (CONTD.)				
	13. Dip. in Tourism & Hotel Management	233	21	254
	14. Dip. in Public Accounts		-NOT AVAILABLE-	
	15. Dip. in Computer Application		-NOT AVAILABLE-	
	16. Dip. in Banking & Insurance		-NOT AVAILABLE-	
	17. Dip. in Bio-Technology		-NOT AVAILABLE-	
	18. Di.p. in Library & Infn. Science		-NOT AVAILABLE-	
	19. Dip. in Library Science	2464	1276	3740
	20. Cert. in Computer Application	584	112	696
	21. Cert. in Mathematics for Social Sciences		-NOT AVAILABLE-	
TAMIL NADU				
Alagappa				
	1. Dip in Computers & Software Applications	432	73	505
Annamalai				
	1. Foundation	361	303	664
	2. B. A.	748	1438	2186
	3. B. Litt.	468	959	1427
	4. B. Com.	966	967	1933
	5. B. Sc.	411	283	694
	6. B. Ed.	13919	7498	21417
	7. B.G.L.	352	46	398
	8. B.A.L.	112	13	125
	9. M.A.	2235	2396	4631
	10. M. Com.	1332	368	1700
	11. M. Sc.	2133	989	3122
	12. M. Ed.	3226	2328	5554
	13. P.G. Dip. in Marketing Management	1010	25	1035
	14. P. G. Dip. in Material Management	900	150	1050
	15. P. G. Dip. in Production Management	500	70	570
	16. P. G. Dip. in Personnel Management	1600	400	2000
	17. P. G. Dip. in Financial Management	310	25	335
	18. P. G. Dip. in Co-operative Management	374	26	400
	19. P. G. Dip. in Business Administration	1676	333	2009
	20. P. G. Dip. in Banking	60	9	69
	21. Dip. in Concrete Tech. & Design of Concrete Structure		409	20

(1)	(2)	(3)	(4)	(5)
Annamalai (Contd.)				
	22. Dip in Maintenance Management	225	6	231
	23. Dip. in Construction Management	240	3	243
	24. Dip. in System Analysis & Data Processing		NOT AVAILABLE	
	25. Dip. in Computer Programming		NOT AVAILABLE	
	26. Dip. in Chemical Process Instrumn. & Control	421	18	439
	27. Dip in Labour Law & Administrative Law	720	102	822
	28. Dip. in Taxation Law		NOT AVAILABLE	
	29. Dip. in Insurance Law		NOT AVAILABLE	
	30. Dip. in Company Law with Banking & Practice		NOT AVAILABLE	
	31. Dip. in Management Law		NOT AVAILABLE	
	32. Dip. in Criminology & Admn. of Criminal Justice		NOT AVAILABLE	
	33. Cert. in Automobile Technology	264	0	264
Madras (1989-90)				
	1. B.A.	10803	9786	20589
	2. B. Litt.	1041	2139	3180
	3. B. Com.	9424	6544	15968
	4. B.Sc.	3304	2067	
	5. B. Ed.	2787	3189	5976
	6. B. Lib. & Infn. Science	682	397	1079
	7. M.A.	15022	11047	26069
	8. M.Com.	4242	2401	6643
	9. M. Ed.	609	418	1027
	10. M. Lib. & Infn. Science	380	131	511
	11. Dip. in Geography	31	31	62
	12. Dip. in Indian Constitution Law	12	1	13
	13. Dip. in Labour Law	323	35	358
	14. Dip. in Taxation Law	202	28	230
	15. Dip. in Insurance Law	46	9	55
	16. Dip. in Mercantile Law	21	5	26
	17. Dip. in Criminal Law with Evidence	42	7	49
	18. Cert. in Library & Infn. Science	646	178	824
	19. B.A. (Open University System)	15357	6591	21948
	20. B. Litt. (Open University System)	2011	1776	3787
	21. B. Com (Open University System)	5017	1096	6113

(1)	(2)	(3)	(4)	(5)
Madras (Contd.)				
	22. B. Sc. (Open University System)	987	278	1265
Madurai Kamraj				
	1. Introductory Courses	549	154	703
	2. Pre-Foundation	999	326	1325
	3. Foundation	930	715	1645
	4. B.A.	6858	8062	14920
	5. B. Litt.	49	48	97
	6. B. Com.	2871	1945	816
	7. B. Sc.	707	550	1257
	8. B. Ed.	871	1092	1963
	9. B.G.L.	615	102	717
	10. B. Lib. & Infn. Science	900	295	1195
	11. M.A.	3980	2163	6143
	12. M. Com.	1601	822	2423
	13. M. Sc.	260	194	454
	14. M. Ed.	350	359	709
	15. P.G. Dip. in Personnel Mngt. & Indl. Relation	489	43	532
	16. P.G. Dip. in Tourism	95	10	105
	17. P.G. Dip. in Journalism & Mass Communication	517	101	618
	18. Dip. in Mangement	129	21	150
	19. Dip. in Computer Application	801	197	998
	20. Dip. in Labour Law & Administrative Law	153	11	164
	21. Dip. in Taxation Law	52	6	58
	22. Cert. in Computers in Office Management	40	7	47
	23. Cert. in Library & Infn. Science	221	99	320
	24. Cert in Family & Child Welfare	31	54	85
Mother Teresa for Women				
	1. M.A.	0	95	95
	2. P.G. Dip. in Computer Application	0	105	105
UTTAR PRADESH				
Allahabad	1. B.A.	2894	622	3516
	2. B. Com.	312	13	325
Kashi Vidyapith				
	1 B.A.	2669	656	3325

(1)	(2)	(3)	(4)	(5)
Meerut				
	1. B.A.	161	124	285
	2. B. Com.	19	29	48
	3. M.A.	838	558	1396
DELHI (U.T.)				
Delhi	1. B.A.	14861	16481	31342
	2. B.A. (Hons.)	138	379	517
	3. B. Com.	10559	4158	14717
	4. B. Com. (Hons.)	1302	440	1742
	5. M.A.	570	983	1553
	6. M. Com.	170	294	464
Indira Gandhi National Open				
	1. B.A./B.Com Preparatory	10679	2456	13135
	2. B.A./B.Com. Foundation	11458	3834	15292
	3. B.A. Foundation		NOT AVAILABLE	
	4. B. Com. Foundation		NOT AVAILABLE	
	5. B. Lib. & Infn. Science	990	535	1525
	6. Dip. (Specialised) in Management	880	18	898
	7. Dip. (Advanced) in Management	2037	92	2129
	8. Dip. in Management	6284	355	6639
	9. Dip. in Distance Education	820	409	1229
	10. Dip. in Creative Writing in English	295	146	441

Note: The courses which show the nil enrolment introduced during 1991-92.

APPENDIX -XXXII

Percentage of Women Enrolment to Total Enrolment: State-Wise (1986-87 to 1990-91)

1986-87

S. No. State/ Union territory	Total Men Enrolment	Women Enrolment	Percentage of women
1. Andhra Pradesh	2,62,141	68,255	26.0
2. Assam	72,788	20,913	28.7
3. Bihar	2,69,361	40,576	15.1
4. Gujarat	2,26,457	77,489	34.2
5. Haryana	79,214	32,163	40.6
6. Himachal Pradesh	20,739	5,297	25.5
7. Jammu & Kashmir	26,659	9,550	35.8
8. Karnataka	2,53,645	69,080	27.2
9. Kerala	1,46,119	73,468	50.3
10. Madhya Pradesh	2,73,099	84,458	30.9
11. Maharashtra	5,06,454	1,75,319	34.6
12. Manipur	10,523	3,412	32.4
13. Meghalaya/Mizoram/Nagaland	10,760	4,143	38.5
14. Orissa	83,084	18,980	22.8
15. Punjab	1,39,562	63,349	45.4
16. Rajasthan	1,78,088	39,974	22.4
17. Tamilnadu	2,73,463	99,575	36.4
18. Uttar Pradesh	5,11,603	1,09,220	21.3
19. West Bengal/Tripura/Sikkim	3,07,946	1,09,059	35.4
20. Delhi	1,02,704	44,569	43.4
Total	37,54,409	11,48,849	/30.6

APPENDIX-XXXII(CONTD.)

Percentage of women Enrolment to Total Enrolment: State-Wise

1987-88

S. No.	State/ Union Territory	Total Enrolment	Women Enrolment	Percentage of women
1.	Andhra Pradesh	2,72,286	72,378	26.6
2.	Assam	75,845	22,276	29.4
3.	Bihar	2,79,058	44,173	15.8
4.	Gujarat	2,35,017	80,955	34.4
5.	Haryana	82,668	32,677	39.5
6.	Himachal Pradesh	21,942	5,700	26.0
7.	Jammu & Kashmir	28,189	10,611	37.6
8.	Karnataka	2,62,447	72,113	27.5
9.	Kerala	1,51,335	77,738	51.4
10.	Madhya Pradesh	2,82,330	90,505	32.1
11.	Maharashtra	5,28,080	1,88,738	35.7
12.	Manipur	11,204	3,715	33.2
13.	Meghalaya/Mizoram/Nagaland	11,246	4,432	39.4
14.	Orissa	85,527	20,011	23.4
15.	Punjab	1,44,838	67,193	46.4
16.	Rajasthan	1,83,894	42,289	23.0
17.	Tamilnadu	2,99,552	1,10,041	36.7
18.	Uttar Pradesh	5,30,379	1,14,577	21.6
19.	West Bengal/Tripura/Sikkim	3,18,539	1,16,702	36.6
20.	Delhi	1,06,452	47,265	44.4
	Total	39,10,828	12,24,089	31.3

APPENDIX-XXXII(CONTD.)

Percentage of Women Enrolment to Total Enrolment : State-Wise

1988-89

S. No.	State/ Union territory	Total Enrolment	Women Enrolment	Percentage of women
1.	Andhra Pradesh	2,82,821	76,336	27.0
2.	Assam	79,030	23,692	30.0
3.	Bihar	2,89,104	46,070	16.0
4.	Gujarat	2,43,901	85,021	35.0
5.	Haryana	86,273	35,143	40.7
6.	Himachal Pradesh	23,214	6,038	26.0
7.	Jammu & Kashmir	29,807	11,043	37.0
8.	Karnataka	2,71,554	76,540	28.2
9.	Kerala	1,56,738	81,330	51.9
10.	Madhya Pradesh	2,91,872	95,057	32.6
11.	Maharashtra	5,50,629	1,95,782	35.6
12.	Manipur	11,929	3,956	33.1
13.	Meghalaya/Mizoram/Nagaland	11,753	4,494	38.2
14.	Orrisa	88,041	20,869	23.7
15.	Punjab	1,50,313	70,362	46.8
16.	Rajasthan	1,89,889	44,066	23.2
17.	Tamilnadu	3,28,129	1,22,551	37.4
18.	Uttar Pradesh	5,49,844	1,21,026	22.0
19.	West Bengal/Tripura/Sikkim	3,29,497	1,22,735	37.3
20.	Delhi	1,10,338	49,561	44.9
	Total	40,74,676	12,91,672	31.7

APPENDIX-XXXII(CONTD.)
Percentage of Women Enrolment to Total Enrolment: State-Wise

1989-90

S. No.	State/ Union territory	Total Enrolment	Women Enrolment	Percentage of women
1.	Andhra Pradesh	2,93,768	80,459	27.4
2.	Assam	82,381	25,061	30.4
3.	Bihar	2,99,743	48,471	16.2
4.	Gujarat	2,53,316	89,605	35.4
5.	Haryana	90,034,	37,216	41.3
6.	Himachal Pradesh	24,579	6,509	26.5
7.	Jammu & Kashmir	31,518	11,850	37.6
8.	Karnataka	2,80,977	80,363	28.6
9.	Kerala	1,62,347	85,484	52.7
10.	Madhya Pradesh	3,01,738	99,719	33.1
11.	Maharashtra	5,74,140	2,07,151	36.1
12.	Manipur	12,701	4,274	33.7
13.	Meghalaya/Mizoram/Nagaland	12,282,	4,767	38.8
14.	Orissa	90,629	21,799	24.1
15.	Punjab	1,55,994	74,098	47.5
16.	Rajasthan	1,96,079	46,173	23.6
17.	Tamilnadu	3,59,432	1,36,222	37.9
18.	Uttar Pradesh	5,70,023	1,27,317	22.3
19.	West Bengal/Tripura/Sikkim	3,40,832	1,28,828	37.8
20.	Delhi	1,14,365	52,129	45.6
	Total	42,46,878	13,67,495	32,2

APPENDIX-XXXII(CONTD.)
Percentage of Women Enrolment to Total Enrolment: State-Wise

1990-91

S. No.	State/ Union territory	Total Enrolment	Women Enrolment	Percentage of women
1.	Andhra Pradesh	3,05,067	84,504	27.7
2.	Assam	85,797	26,597	31.0
3.	Bihar	3,10,672	50,950	16.4
4.	Gujarat	2,63,059	93,123	35.4
5.	Haryana	93,946	39,645	42.2
6.	Himachal Pradesh	26,016	6,972	26.8
7.	Jammu & Kashmir	33,298	12,520	37.6
8.	Karnataka	2,90,661	84,873	29.2
9.	Kerala	1,67,942	89,009	53.0
10.	Madhya Pradesh	3,11,836	1,06,648	34.2
11.	Maharashtra	5,98,519	2,20,255	36.8
12.	Manipur	13,469	4,593	34.1
13.	Meghalaya/Mizoram/Nagaland	12,828	5,003	39.0
14.	Orissa	93,209	23,302	25.0
15.	Punjab	1,61,526	77,856	48.2
16.	Rajasthan	2,02,445	48,992	24.2
17.	Tamilnadu	3,93,375	1,38,381	38.5
18.	Uttar Pradesh	5,90,808	1,33,523	22.6
19.	West Bengal/Tripura/Sikkim	3,52,238	1,35,259	38.4
20.	Delhi	1,18,536	54,882	46.3
	Total	44,25,247	14,36,887	32.5

APPENDIX-XXXIII
Percentage of Women Enrolment to Total Enrolment: Stage-Wise

Year	GRADUATE			POSTGRADUATE			RESEARCH		
	T	W	%	T	W	%	T	W	%
1981-82	25,88,759	7,16,249	27.7	2,85,892	81,645	28.6	34,588	9,581	27.7
1982-83	27,57,893	7,73,342	28.0	2,96,103	86,380	29.2	36,731	10,673	29.1
1983-84	29,12,487	8,25,409	28.3	3,13,110	93,728	29.9	36,249	10,615	29.3
1984-85	29,99,621	8,71,571	29.1	3,22,541	98,415	30.5	38,160	11,332	29.7
1985-86	31,78,897	9,37,996	29.5	3,37,679	1,05,218	31.2	40,346	12,526	31.0
1986-87	33,07,634	10,10,151	30.5	3,56,669	1,13,231	31.7	41,299	13,340	32.3
1987-88	34,45,439	10,76,280	31.2	3,71,529	1,21,490	31.5	43,019	13,812	32.1
1988-89	35,89,790	11,35,233	31.6	3,87,094	1,27,741	33.0	44,821	15,508	34.6
1989-90	37,41,500	12,01,344	32.1	4,03,453	1,35,560	33.6	46,716	16,678	35.7
1990-91	38,98,643	12,60,576	32.3	4,20,398	1,43,776	34.2	48,678	17,865	36.7

APPENDIX-XXXIII (CONTD.)

YEAR	DIPLOMA/CERTIFICATE			TOTAL		
	T	W	%	T	W	%
1981-82	42,827	9,229	21.5	29,52,066	8,16,704	27.7
1982-83	42,366	9,811	23.2	31,33,093	8,80,156	28.1
1983-84	45,803	10,501	22.9	33,07,649	9,40,253	28.4
1984-85	43,774	10,821	24.7	34,04,096	9,92,139	29.1
1985-86	48,107	11,744	24.4	36,05,029	10,67,484	29.6
1986-87	48,807	12,127	24.9	37,54,409	11,48,849	30.6
1987-88	50,841	12,507	24.6	39,10,828	12,24,089	31.3
1988-89	52,971	13,190	24.9	40,74,676	12,91,672	31.7
1989-90	55,209	13,913	25.2	42,46,878	13,67,495	32.2
1990-91	57,528	14,670	25.5	44,25,247	14,36,887	32.5

T = Total Enrolment W = Women Enrolment

% = Percentage of Women Enrolment to Total Enrolment.

APPENDIX-XXXIV

Percentage of Women Enrolment to Total Enrolment : Faculty-Wise (1981-82 to 1990-91)

YEAR	ARTS			SCIENCE			COMMERCE		
	T	W	%	T	W	%	T	W	%
1981-82	11,90,177	4,54,990	38.2	5,78,766	1,65,666	28.6	6,28,031	1,04,964	16.7
1982-83	12,59,587	4,87,620	38.7	6,23,545	1,79,650	28.8	6,69,813	1,16,837	17.4
1983-84	13,38,106	5,17,017	38.6	6,53,092	1,89,685	29.0	7,03,638	1,31,379	18.7
1984-85	13,72,277	5,40,686	39.4	6,69,563	2,00,632	30.0	7,38,506	1,42,222	19.3
1985-86	14,66,295	5,76,251	39.3	7,00,991	2,15,730	30.8	7,82,068	1,56,748	20.0
1986-87	15,18,282	6,28,047	41.4	7,35,864	2,31,061	31.4	8,22,216	1,61,977	19.7
1987-88	15,81,542	6,71,075	42.4	6,68,022	2,45,720	32.0	8,57,971	1,72,201	20.1
1988-89	16,45,414	7,06,877	42.9	8,00,266	2,59,061	32.4	8,93,984	1,81,984	20.4
1989-90	17,17,437	7,48,921	43.6	8,34,087	2,74,508	32.9	9,31,765	1,92,007	20.6
1990-91	17,89,480	7,84,360	44.0	8,69,119	2,89,417	33.3	9,69,882	2,01,735	20.8

APPENDIX-XXXIV (CONTD.)

YEAR	EDUCATION			ENGG./TECH.			MEDICINE		
	T	W	%	T	W	%	T	W	%
1981-82	71,168	34,383	48.3	1,30,189	5,866	4.5	1,13,794	29,792	26.2
1982-83	74,167	34,893	47.0	1,42,440	7,173	5.0	1,13,902	31,648	27.8
1983-84	74,679	35,337	47.3	1,53,131	8,469	5.5	1,18,989	33,676	28.3
1984-85	76,522	36,555	47.8	1,59,046	10,052	6.3	1,18,890	35,190	29.6
1985-86	82,636	38,569	46.7	1,76,540	12,182	6.9	1,23,057	37,549	30.5
1986-87	86,352	43,608	50.5	1,83,966	12,694	6.9	1,27,650	38,933	30.5
1987-88	89,949	46,296	51.5	1,92,148	13,555	7.1	1,31,013	40,484	30.9
1988-89	93,718	48,764	52.0	2,01,289	14,591	7.3	1,37,257	43,205	31.5
1989-90	95,979	50,736	52.9	2,09,371	15,840	7.6	1,42,270	45,321	31.9
1990-91	99,613	53,193	53.4	2,16,837	17,130	7.9	1,50,458	48,598	32.3

APPENDIX-XXXIV(CONTD.)

YEAR	AGRICULTURE			VET. SCIENCE			LAW		
	T	W	%	T	W	%	T	W	%
1981-82	39,318	1,390	3.5	8,173	352	4.3	1,74,445	12,309	7.1
1982-83	39,425	1,595	4.0	8,797	424	4.8	1,83,153	13,576	7.4
1983-84	41,588	1,719	4.1	9,268	470	5.1	1,94,555	15,156	7.8
1984-85	41,741	2,045	4.9	9,413	506	5.4	1,95,708	15,745	8.0
1985-86	41,901	2,345	5.6	9,486	664	7.0	1,96,106	17,594	9.0
1986-87	42,800	2,525	5.9	9,761	683	7.0	1,98,984	18,307	9.2
1987-88	43,410	2,674	6.2	10,168	727	7.2	2,05,318	19,176	9.3
1988-89	44,007	2,840	6.5	10,594	779	7.4	2,13,920	20,180	9.4
1989-90	45,229	3,106	6.9	10,957	862	7.9	2,22,961	21,752	9.8
1990-91	46,908	3,377	7.2	11,063	907	8.2	2,34,538	23,454	10.0

APPENDIX-XXXIV(CONTD.)

YEAR	OTHERS			TOTAL		
	T	W	%	T	W	%
1981-82	18,005	6,992	38.8	29,52,066	8,16704	27.7
1982-83	18,264	6,740	36.9	31,33,093	8,80,156	28.1
1983-84	20,603	7,345	35.7	33,07,649	9,40,253	28.4
1984-85	22,430	8,506	37.9	34,04,096	9,92,139	29.1
1985-86	25,949	9,852	38.0	36,05,029	10,67,484	29.6
1986-87	28,534	11,014	38.6	37,54,409	11,48,849	30.6
1987-88	31,287	12,181	38.9	39,10,828	12,24,089	31.3
1988-89	34,227	13,391	39.1	40,74,676	12,91,672	31.7
1989-90	36,822	14,442	39.2	42,46,878	13,67,495	32.2
1990-91	37,349	14,716	39.4	44,25,247	14,36,887	32.5

T = Total Enrolment, W = Women Enrolment,

% = Percentage of women Enrolment to Total Enrolment.