



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

"(Established by Government of Central Provinces Education Department by Notification No. 513 dated the 1st of August, 1923 & presently a State University governed by Maharashtra Public Universities Act, 2016 (Mah. Act No. VI of 2017).)"

DIERCTION NO. 38 OF 2023

**ADMISSIONS AND EXAMINATIONS LEADING TO THE AWARD OF THE
CERTIFICATE, DIPLOMA OR DEGREE OF BACHELOR OF COMMERCE
(COMPUTER APPLICATION) (B.C.C.A.) (OUTCOME BASED) (CHOICE BASED
CREDIT SYSTEM), DIRECTION, 2023**

Whereas, Maharashtra Public Universities Act 2016(VI of 2017)(hereinafter the Act) has come into force from 1st March, 2017;

AND

Whereas, the University has issued Direction to 27 of 2022 dealing with composition of the four faculties created by the Act, where under the earlier different faculties of the University have been merged into the four new faculties created by the Act, by which the subject of Business Administration has been included in the faculty of Commerce and Management;

AND

Whereas, MHRD, New Delhi & UGC issued the guidelines for implementation of NEP 2020 in all universities in UG & PG programs from academic session 2022-23. So it was necessary to restructure the complete scheme of examination incorporating curriculum features as mentioned in NEP 2020.

AND

Whereas, the Faculty of Commerce and Management in its meeting dated 24.6.22 has recommended to restructure the BCCA program so as to meet the expectations of new National Education Policy 2020, certain changes were also suggested by the Faculty, it was also resolve to empower the Hon'ble Vice Chancellor to accept the scheme once prepared and accepted by the

Board of Studies for Business Management, on behalf of the Faculty of Commerce and Management;

AND

Whereas, the Academic Council in its meeting held on 8.7. 2022 vide item No. 23 has considered, accepted the recommendation of Faculty of Commerce and Management whereby authorized the Vice Chancellor to accept the Scheme of Examination and syllabi prepared by the Board of Studies in Business Management, for the program of Bachelor of Business Management in order to give effect to the provisions of National Education Policy 2020;

AND

Whereas, the Board of Studies in its meeting dated 19.7.22 has accepted the detailed scheme of examination and syllabus for the Bachelor of Business management with the option of award of Certificate and Diploma in between if the student so desires, as per the new National education Policy as prepared by the sub-committee with minor changes, the said program is to commence from academic year 2022-23;

AND

Whereas, the Vice Chancellor has granted approval to the scheme of examination so prepared and accepted by the Board of Studies on behalf of the Faculty of Commerce and Management and the Academic Council as resolved by the Faculty of Commerce and Management and the Academic Council in their meetings dated 24.6.22 and 8.7.22 respectively;

AND

Whereas, the Direction No. 43 of 2022 entitled "ADMISSIONS AND EXAMINATIONS LEADING TO THE AWARD OF THE CERTIFICATE, DIPLOMA OR DEGREE OF BACHELOR OF COMMERCE (COMPUTER APPLICATION) (B.C.C.A.) (OUTCOME BASED) (CHOICE BASED CREDIT SYSTEM), DIRECTION, 2022" has lapsed by virtue of proviso to subsection (8) of section 12 of the Act as the said Direction could not be converted in to an Ordinance within the prescribed time and since Ordinance making is a time consuming process and there is an urgency to regularized the admissions and examinations of BACHELOR OF COMMERCE (COMPUTER APPLICATION) (BCCA) (OUTCOME BASED)(CHOICE BASED CREDIT SYSTEM) incorporating the provisions of the Direction since lapsed;

Now, therefore, I, **Dr. Subhash R. Chaudhari, Vice-Chancellor** Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, in exercise of powers conferred upon me under provision



10/07/22

of section 12(8) of the Maharashtra Public Universities Act, 2016, do hereby issue following Directions;

1. This Direction may be called 'ADMISSIONS AND EXAMINATIONS LEADING TO THE AWARD OF THE CERTIFICATE, DIPLOMA OR DEGREE OF BACHELOR OF COMMERCE (COMPUTER APPLICATION) (BCCA) (OUTCOME BASED) (CHOICE BASED CREDIT SYSTEM), DIRECTION, 2023
2. This Direction shall be made applicable from the date of its issuance.
3. **INTERPRETATION CLAUSE:** In this Direction, unless the context requires otherwise the words, phrases and abbreviations shall have following meaning :-
 - a. "Academic Council" means Academic Council of R.T.M. Nagpur University.
 - b. "ATKT" refers to allowed to keep term in higher semester.
 - c. "Board of Studies" means Board of Studies for various subjects of commerce in the faculty of Commerce and Management in the University.
 - d. "Competent Authority" (for admission purpose) means an "Authority" established or assigned the duty to regulate admissions in the course by the Government of Maharashtra or an authority constituted by the University, for this purpose.
 - e. "Credit Points" refer to the product of No. of credits multiplied by the Grade Point for a given course/paper.
 - f. "Credit" (C) for a course is dependent on the number of hours of instruction per week in that course, and is obtained by using a multiplier of one (1) for lecture and a multiplier of half (1/2) for practical (laboratory) hours.
 - g. "Course" means a paper/subject (theory or practical) prescribed for any semester of the programme.
 - h. "Cumulative Grade Point Average (CGPA)" refers to the Cumulative Grade Point Average weighted across all semesters (4 semesters)
 - i. "Degree" means the Under Graduate Degree awarded after successful completion of the programme governed by this Direction.



- j. "Fees" means the fees prescribed by the University/ Shikshan Shulka Samiti of Government of Maharashtra, for the Under Graduate programme under this Direction, from time to time.
- k. "Grade letter" is an index to indicate the performance of a student in a particular course (Paper). It is the transformation of actual marks secured by a student in a course/paper. Grade letters are O, A, B, C, P, F and AB.
- l. "Grade Point" is the weightage allotted to each grade letter depending on the range of marks awarded in a course/paper.
- m. "Graduate programme" means Bachelors' degree programme in Commerce (Computer Application).
- n. "Semester Grade Point Average (SGPA)" refers to the performance of the student in a given semester. SGPA is based on the total credit points earned by the student in all the courses and the total number of credits assigned to the courses/papers in a Semester.
- o. "Student" means student admitted to Bachelor's degree programme in commerce under this direction.
- p. "University" means Rashtrasant Tukadoji Maharaj Nagpur University.

4. THE DURATION OF THE PROGRAMME: - There shall be Six Examinations leading to the degree of Bachelor of Commerce (Computer Application) (BCCA) namely:

- The Bachelor of Commerce (Computer Application) (BCCA) – 1st Semester Examination,
- The Bachelor of Commerce (Computer Application) (BCCA) – 2ND Semester Examination,
- The Bachelor of Commerce (Computer Application) (BCCA) – 3RD Semester Examination,
- The Bachelor of Commerce (Computer Application) (BCCA) – 4th Semester Examination,
- The Bachelor of Commerce (Computer Application) (BCCA) – 5th Semester Examination,
- The Bachelor of Commerce (Computer Application) (BCCA) – 6th Semester Examination.

5. The duration of the Degree Course under this shall be of three academic years divided into six semesters with the BCCA 1st and 2nd Semester Examinations during the first academic year, the BCCA 3rd and 4th Semester Examinations during the second year and the BCCA 5th and 6th Semester Examinations during the third year.



6. The examinations specified in paragraph 4 above shall be held twice a year at such places and on such dates as may be fixed by the University.

7. ELIGIBILITY FOR ADMISSION:

a. Subject to the provisions of general ordinances of the university regarding admissions in various courses of the university, including reservation of seats, an applicant for admission to this programme, governed by this Direction, shall have passed-

- i. XII Standard Examination of the Maharashtra State Board of Secondary and Higher Secondary Education, with English at Higher or Lower level and any Modern Indian Language at higher or lower level with any combination of optional subjects;

OR

- ii. XII Standard Examination of Maharashtra State Board of Secondary and Higher Secondary Education in Vocational Stream with one language only, or any other examination recognized as equivalent thereto; in such subjects and with such standards of attainments as may be prescribed to be Minimum Competency Vocation Course(MCVC) by the competent authority.

OR

- iii. Any other Equivalent Examination of any other State Board, Central Board or International Board in 10+2 pattern and any combination of other subjects.

OR

- iv. Any equivalent Qualification from any foreign country recognized by the university.

b. No person shall be admitted to this Program, if he has already passed the same Program or a Program of any other statutory University, which has been recognized as equivalent to this program.



c. A student admitted to the program under this Direction shall not be allowed to join any other program in this University or any other University simultaneously. Any violation of this condition will amount to an unfair practice and shall be actionable as per the relevant rules of the university.

8. THE STRUCTURE OF THE PROGRAMME:

The BACHELOR OF COMMERCE (COMPUTER APPLICATION) (B.C.C.A.) OUTCOME BASED & CHOICE BASED CREDIT SYSTEM (OB & CBCS) programme shall consist of Six Semesters. The number of courses in each semester, the maximum marks and the credits for each course and the minimum passing marks for each course as mentioned in teaching and Examination Scheme, absorption scheme in respective semesters shall be as detailed in APPENDIX- I appended to this Direction. Detail syllabus & paper pattern is enclosed in APPENDIX-II.

- ✓ For all Theory Papers there shall be FIVE Periods Per week per Subject of 48 Minutes duration each. Each Theory Paper must cover minimum 60 Clock Hours (*60 LECTURES OF 48 MINS EACH) of Teaching in each semester.
- ✓ The college shall offer the subjects of any particular optional subject only if 40 or more students are opting for the particular subject.
- ✓ The fees for the programme and the University examinations shall be as prescribed by the University from time to time.

Teaching and Examination Scheme for examinees of Bachelor of Commerce (Computer Application) (BCCA) 1st, 2nd, 3rd, 4th, 5th, and 6th Semester Examinations shall be as mentioned below:



Teaching and Examination Scheme
B.Com. (Computer Application) (BCCA) (OB & CBCS)

Teaching and Examination Scheme

(A) BCCA Part –I

Semester – I

Course Code	Subjects	Paper	Teaching Scheme per weeks			Examination Scheme						Total Marks	Credits
			Theory (Periods)	Practical (Periods)	Total (Periods)	Theory				Practical			
						Max Marks-Theory Paper (TH)	Max Marks – CIE	Total	Min Passing Marks	Max Mark - Practical (PR)	Min Passing Marks		
Theory													
1AE1	English and Business Communication - I	I	5	-	5	80	20	100	40	-	-	100	4
1CC2	MS Office (IT)	II	5	-	5	00	100	100	40	-	-	100	4
1CC3	Fundamentals of Computers	III	5	-	5	80	20	100	40	-	-	100	4
1GE4	Professional Ethics & Human Values <u>OR</u> Personal Wellbeing	IV	5	-	5	00	100	100	40	-	-	100	4
Practical													
1CC5	Practical of Tally I & MS Office	P- I	-	10	10	-	-	-	-	100	50	100	4
	Total		20	10	30	160	240	400	160	100	50	500	20

Semester – II

Course Code	Subjects	Paper	Teaching Scheme per weeks			Examination Scheme						Total Marks	Credits
						Theory				Practical			
			Theory (Periods)	Practical (Periods)	Total (Periods)	Max Marks – Theory Paper (TH)	Max Marks – CIE Total	Min Passing Marks	Max Marks - Practical	Min Passing Marks			
Theory													
2AE1	English and Business Communication – II	I	5	-	5	80	20	100	40	-	-	100	4
2CC2	Principles of Business Management	II	5	-	5	80	20	100	40	-	-	100	4
2CC3	Database management system	III	5	-	5	80	20	100	40	-	-	100	4
2SE4	E-Commerce and Web Designing	IV	5	-	5	80	20	100	40	-	-	100	4
Practical													
2CC5	Practical of Tally II	P- I	-	10	10	-	-	-	-	100	50	100	4
	Total		20	10	30	320	80	400	160	100	50	500	20

(B)BCCA Part –II**Semester – III**

Course Code	Subjects	Paper	Teaching Scheme per weeks			Examination Scheme						Total Marks	Credits
			Theory (Periods)	Practical (Periods)	Total (Periods)	Theory				Practical			
						Max Marks – Theory Paper (TH)	Max Marks – CIE	Total	Min Passing Marks	Max Marks –Practical (PR)	Min Passing Marks		
Theory													
3AE1	Environmental Studies & Community Engagement	I	5	-	5	80	20	100	40	-	-	100	4
3CC2	Business Studies	II	5	-	5	80	20	100	40	-	-	100	4
3AE3	CSS & Java Script	III	5	-	5	80	20	100	40	-	-	100	4
3GE4	Ethical Hacking <u>OR</u>	IV	5	-	5	100	100	100	40	-	-	100	4
	Computer Network <u>OR</u> Content Writing & Analysis												
Practical													
3CC 5	CSS & Java Script & Statistical Techniques using MS Excel	P- I	-	10	10	-	-	-	-	100	50	100	4
	Total		20	10	30	240	160	400	160	100	50	500	20

Semester - IV

Course Code	Subjects	Paper	Teaching Scheme per weeks			Examination Scheme						Total Marks	Credits
						Theory				Practical			
			Theory (Periods)	Practical (Periods)	Total (Periods)	Max Marks – Theory Paper (TH)	Max Marks – CIE	Total	Min Passing Marks	Max Marks – Practical (PR)	Min Passing Marks		
Theory													
4CC1	Business Economics	I	5	-	5	80	20	100	40	-	-	100	4
4GE2	Business Law & Cyber Security <u>OR</u> Research Methodology	II	5	-	5	80	20	100	40	-	-	100	4
4DSE3	Cloud Computing <u>OR</u> Artificial Intelligence & Machine Learning <u>OR</u> Management Information System	III	5	-	5	80	20	100	40	-	-	100	4
4SE4	PHP & MySQL	IV	5	-	5	80	20	100	40	-	-	100	4
Practical													
4CC5	Practical PHP & My SQL	P- I	-	10	10	-	-	-	-	100	50	100	4
	Total		20	10	30	320	80	400	160	100	50	500	20

(C) BCCA Part –III

Semester – V

Course Code	Subjects	Paper	Teaching Scheme per weeks			Examination Scheme						Total Marks	Credits
			Theory (Periods)	Practical (Periods)	Total (Periods)	Max Marks – Theory Paper (TH)	Max Marks – CIE	Total	Min Passing Marks	Practical			
										Max Marks – Practical (PR)	Min Passing Marks		
Theory													
5CC1	Python	I	5	-	5	80	20	100	40	-	-	100	4
5AE2	Internet of Things	II	5	-	5	80	20	100	40	-	-	100	4
5DSE 3	Big Data <u>OR</u> Block chain Technology <u>OR</u> Software Project Management	III	5	-	5	100	100	100	40	-	-	100	4
5CC4	Internship of 120 Hrs (Internal Evaluation)	IV	5	-	5	100	100	100	40	-	-	100	4
Practical													
5CC5	Practical of Python & Data Visualization	P- I	-	10	10	-	-	-	-	100	50	100	4
	Total		20	10	30	160	240	400	160	100	50	500	20

Semester - VI

Course Code	Subjects	Paper	Teaching Scheme per weeks			Examination Scheme						Total Marks	Credits	
			Theory (Periods)	Practical (Periods)	Total (Periods)	Max Marks – Theory Paper (TH) Max Marks – CIE	Total	Min Passing Marks	Practical					
									Max Marks – Practical (PR)	Min Passing Marks				
Theory														
6SE 1	Web Technology and Multimedia	I	5	-	5	80	20	100	40	-	-	100	4	
6SE 2	Entrepreneurship Skill Development	II	5	-	5	80	20	100	40	-	-	100	4	
6GE 3	Digital Marketing <u>OR</u> Company law & Secretarial practices	III	5	-	5	80	20	100	40	-	-	100	4	
6CC4	Project	Project	-	20	10	-	-	-	-	200	100	200	8	
	Total		15	20	35	240	60	300	120	200	100	500	20	

- TH = Theory, IA = Internal Assessment, SE = Skill Enhancement, DSE = Discipline Specific Elective, CC = Core Course, AE = Ability Enhancement, GE = Generic Elective
- The practical shall be treated as a separate passing head.
- Practical Record File should be prepared for Practical Subjects. Both components (if applicable) should be included in Practical Record File.
- The Practical batch size shall be of **60 (Sixty)** students per batch with Two students sharing one computer terminal.
- The candidate has to pass theory papers and Practical separately.
- For all semesters, end semester theory examination will be of 80 marks and 20 marks shall be internal assessment. Internal Assessment shall comprise of 5 Marks Attendance, 5 marks continuous evaluation & 10 Marks of fields assignment/mini project/market surveys/research

papers, research/live projects etc. to be done in group of maximum 4 students.

- Above instructions are applicable for all semesters.

Credit Summary (Course Composition Matrix)

	Sem-I	Sem-II	Sem-III	Sem-IV	Sem-V	Sem-VI	Total Courses
CC	3	3	2	2	3	2	15
AE	1	1	2	0	1	0	5
SE	0	1	0	1	0	2	4
DSE	0	0	0	1	1	0	2
GE	1	0	1	1	0	1	4
Total Semester Credits	20	20	20	20	20	20	
Total Credits	120						30

9. RULES OF EXAMINATION:

- The Examinations for Semesters I, II, III, IV, V and VI shall be held twice a year. The university examinations shall be held at such places and on such dates as may be notified by the University. The I, III & V Semester examinations shall be conducted at college level as per University directives & schedule.
- The passing heads in respect of all the courses, including languages, shall consist of the university theory examination and internal assessment marks taken together.
- In order to pass any subject (course) a student must secure not less than 40 % of the maximum marks prescribed for that course, i.e. to say, out of total 100 marks (80 for university examination and 20 for internal assessment), the student must have obtained minimum 40 marks together in the university examination and internal assessment.
- The results of successful candidates at the end of semester-VI shall be classified on the basis of aggregate marks obtained in all the six semesters.
- The candidates who pass all the semester examinations in the first attempt and have completed program in minimum prescribed period for the program, shall only be eligible

for ranks.

- f) The results of the candidates who have passed the Semester-VI examination but not passed the lower semester examinations shall be declared as NCL (not completed lower semester examinations). Such candidates shall be eligible for the Degree only after successful completion of all the lower semester examinations.
- g) An unsuccessful examinee at any end semester examination shall be eligible for re-examination on the payment of a fresh Examination fees prescribed by the University.
- h) As examinee who has successfully passed the examination of all the semesters shall, on payment of the prescribed fees be entitled to receive a Degree of Bachelor of Commerce (Computer Application) in the prescribed format signed by the Vice-Chancellor.
- i) The provisions of Ordinance No. 3 of 2007 for the award of grace marks for passing an examination, securing higher grade in subject(s) as updated from time to time shall apply to the examination under this Direction.
- j) University guidelines & direction updated from time to time regarding Improvement of results, Reassessment/Revaluation and Incentive Marks shall be applicable to BCCA program governed by this direction.

NOTE:

- I. A student has to compulsorily complete all core courses (15) of 1st, 2nd, & 3rd year with total 60 credits to be eligible to obtain the degree. Students also will have to compulsorily complete DSE (Discipline Specific Elective) of 8 credits.**
- II. Students may opt for ODL (Online Distance Learning) in place of AE/SE/GE courses across semesters accumulating equal number of credits in order to substitute any course. (ODL certificate specifying credits is mandatorily to be submitted)**
- III. Students opting for ODL in place of AE/SE/GE courses across semesters will have to bear expenses incurred for ODL course fee & Examination fee if any.**
- IV. Provision for Multiple Exit:**

The BCCA program offered under this direction provides an opportunity to students for multiple exits from the program as per following conditions:



- a. A student can exit the program after successful completion of 1st and 2nd Semester courses and obtaining 40 credits. Such a student is eligible to be awarded '**Certificate in Commercial Computer Application**' by the University.
- b. A student can exit the program after successful completion of 1st, 2nd, 3rd and 4th Semester courses and obtaining 80 credits. Such a student is eligible to be awarded '**Diploma in Commercial Computer Application**' by the University.
- c. A student who has completed the 3 years' program and earned 120 credits will be considered eligible for award of '**Bachelor of Commerce (Computer Application)**' degree by the University.
- d. A student who wishes to exit the program before completion of 3 years is required to apply to the university through Principal.
- e. A student who opted for exit from the program before completion of 3 years (a & b) above shall be eligible for admission to next year of the program in any subsequent academic session. However, if at the time of admission, if this scheme of examination is not in force, the student will have to complete the program according to the provisions made under the direction prevailing at the time of such admission.

V. Provision for Transfer of Credits

BCCA program offered under this direction provides enhanced academic flexibility to students in terms of selecting the courses they want to learn. A student can opt for any course from any statutory/recognized University or any recognized online learning platform such as SWAYAM/NPTEL in lieu of a course (except Core Course and Discipline Specific Electives) mentioned in this scheme of examination. Similarly, a student can opt for transfer of credits by successfully completing the course recognized by the '**Department of Lifelong learning & Extension**' of Rashtrasant Tukadoji Maharaj Nagpur University. The mechanism for transfer of credits earned through these courses to be adhered is mentioned here:



- ✓ A student seeking for facility for transfer of credits earned from any other platform will have to mandatorily open an account with '**Academic Bank of Credits**' and upload the credits so earned therein.
- ✓ Any **Core Course or Discipline Specific Elective** mentioned in this scheme of examination cannot be opted out by a student.
- ✓ A student can opt out any course other than Core Course/Discipline Specific Elective and earn equal number of credits by completing any **ODL or Online course/s from any statutory/recognized University or any recognized online learning platform such as SWAYAM/NPTEL.**
- ✓ A student can opt out any course other than Core Course/Discipline Specific Elective and earn equal number of credits by successfully completing the course recognized by the '**Department of Lifelong learning & Extension**' of **Rashtrasant Tukadoji Maharaj Nagpur University.**
- ✓ If a student is willing to opt out any such course, he/she will have to mention this while submitting the examination form to the University for respective semester.
- ✓ A certificate of completion of such an ODL/Online course shall be submitted by the student to the University through college before end term evaluation.
- ✓ Such a certificate shall mandatorily have the number of credits, duration of the course and grades/marks obtained by the student and shall preferably have a QR code for verification.
- ✓ The college shall submit the grades and marks obtained by the student to the University along with Internal Assessment marks for the concerned examination.
- ✓ If a student has opted for an ODL/Online course in a particular semester and failed to submit the certificate within prescribed time, the student will be marked for 'Absent' for a particular course in that examination. Such a student will be required to fill in the examination form in the consecutive attempt and submit the passing certificate to get his/her corrected result.





9. ASSESSMENT

- The final total assessment of the candidates is made in terms of a Continuous Internal Evaluation (CIE) and an external assessment for each course/subject taken together.
- For each paper (other than Practical, Internship and Project), 20 marks will be Continuous Internal Evaluation and 80 marks for semester end examination to be conducted at college level (Odd semesters examinations) and RTM Nagpur University level (Even semester examinations)
- For subjects having Continuous Internal Evaluation (CIE) of 100 marks, separate evaluation mechanism is provided with the detailed curriculum for respective subject.

(A) Continuous Internal Evaluation

1a	Attendance of the student during a particular semester	05 marks
1b	Continues assessment (Unit Test) based on curriculum to be assessed by the teacher concerned.	05 marks
1c	Activity assignment based assessment as per activity record document	10 marks
1	Internal assessment Total marks	20
2	Semester wise End Examination marks	80
Total Marks Per Course		100

- Each subject teacher must circulate the list of minimum 5 activities/practicals of field assignment/mini project/market surveys/research papers & research/live projects etc (May be executed in group of 4 students maximum) at the beginning of course and evaluate the same for 10 marks as per 1c above.
- There shall be no separate / extra allotment of workload to the concerned teacher. He/ She shall conduct the CIE activity during the regular teaching days / periods as a part of regular teaching activity.

- The internal marks will be communicated to the University at the end of each semester, but before the semester end examinations / as instructed by university. These marks will be considered for the declaration of the results.
- The record of internal marks, evaluation & result should be maintained for a period of one year by respective institute/college for verification by competent authority.

(B) Assessment of Semester VI Project –

- ✓ **Project Work may include CSS/JAVA Script, Website/Web page, Mobile app, Advance Excel & Dashboard, PHP My SQL, Python, Data Visualization, Java, Android Programing, WordPress & .NET technologies etc.**
- ✓ ***Project based on any application development platform/programing language which a student might have learnt in ODL is also allowed.**
- ✓ ***Project to be executed in group of Maximum 4 students.**

For Project work, guide /supervisor must be allotted by the Institute. The Guide/ Supervisor shall act as an internal examiner for project Examination and award marks to individual students in these groups at the time of demonstration/ Presentation and Viva-voce.

- a. The guide or the supervisor shall be appointed by the Principal of college and should be full time approved faculty to BCCA/ MCM Programme.
- b. The External examiner shall be appointed from the list of full-time approved teaching faculty of the BCCA/ MCM program by the University.
- c. Each such External examiner shall examine and award marks to individual students in these groups.
- d. One copy of Project work report (Printed & Hard Bound) shall be submitted to the College/Department, at least One Month prior to the date of commencement of Semester-VI Examination for evaluation purpose. The College shall retain the copy of Project Work.

- e. A Candidate shall submit with his/her/their project work, a certificate from the Supervisor to the effect:

That the candidate has satisfactorily completed the Project work for not less than one session and

That the Project work is the result of the candidates own work and is of sufficiently high standard to warrant its presentation for examination (As per Format in Appendix – I).

Candidate shall submit his/her/their declaration that the Project is the result of his own research work and the same has not been previously submitted to any examination of this University or any other University. (As per Format in Appendix – I). The Project shall be liable to be rejected and /or cancelled if found otherwise.

- f. The Project work shall be evaluated through demonstration and Viva-voce at the College/ Department center before Semester VI examination.
- g. A student appearing for BCCA Semester VI Examination will have to pay additional fees for evaluation of project as prescribed by the University from time to time.

Classification of Project Marks: -

Report & Documentation (Internal)	100
Demonstration & Viva-voce (External)	100

Total Marks	200
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The marks of Project shall be notified as a whole out of 200 in University Portal Foil/C-Foil.

(C) Assessment of Practical -

- i. Practical exam shall be of 4 hours' duration.
- ii. A Student is expected to complete the Practical Assignments based on Syllabus of Practical (As per practical list given in Appendix II) and submit the same in the form of a files (Practical assignment Record) at the end of Academic Session for the evaluation purpose.



- iii. The Practical Record of every student shall carry a certificate as shown in Appendix -I, duly signed by the teacher-in-charge and the Head of the Department.
- iv. If the student fails to submit his / her certified Practical Record duly signed by the Teacher-In-Charge and the Head of the Department, he / she shall not be allowed to appear for the Practical Examination and no Marks shall be allotted to the student.
- v. After Viva-Voice and evaluation of practical records of a student by the Internal & External Examiner, both examiners should sign on the certificate of practical records.
- vi. The Internal Examiner shall be appointed by the Principal of college/institute and should be full time approved faculty to BCCA/ MCM Programme.

The External examiner shall be appointed from the list of full-time approved teaching faculty of the BCCA/ MCM program by the University.

For practical examination of **odd semesters** to be conducted at college level, the internal & external examiners shall be appointed by Principal at college level. For practical examination of **Even semesters** to be conducted at university level, the external examiners shall be appointed by university.

Classification of Practical Marks: -

	C1 Marks	C2 Marks	Total
1. Writing a Program or Problem solution (Algorithm & Flow diagram if applicable) Execute on a computer Print Hard Copy Output/ Report	20	20	40
2. Writing a Program or Problem solution (Algorithm & Flow diagram if applicable)	10	10	20
External Viva Voce			20
Practical Record			20

Total Marks

100

20

Note:

1. Since some practical contains two components (i.e. two subjects), so each component have to be evaluated as above. In case of single component of practical subject, student has to write allotted 2 practical questions & execute 2 practical questions separately.
2. Whereas, the marks of Practical shall be notified as a whole out of 100 in University Portal Foil / C-Foil.

(D) Internships and its evaluation

At the end of fourth semester, all students will have to undergo internship which may be a Field Survey/ Research Projects of 4-6 weeks (Minimum 120 hours) with an industrial, business, service, or social organization by taking a project study. The condition of successfully completing the program shall not be deemed to have been satisfied unless a student undergoes **Internship** training under the supervision of the department in organizations as approved by the Director/ Principal/ Head / Faculty from time to time. Alternatively, the Director/ Principal/ Head / Faculty of the Department/ College/ Institute may allocate the sector/ industry/ company specific project to the individual student. Each student will be required to submit an **Internship** project report to the Department/ College/ Institute for the work undertaken during this period within three weeks of commencement of the **FIFTH** semester for the purpose of evaluation in the Fifth semester. The evaluation will be of 100 marks. The evaluation will be internal at college level. The detailed parameters for evaluation of Internship will be provided by the colleges at the time of its assessment and evaluation.

The scope of the subjects, pattern of examination & list of Practical Programs / Problems / questions shall be as indicated in the Appendix – II.

The Medium of instructions and examinations shall be in ENGLISH only.

The Maximum/minimum marks which each subject carries & workload in BCCA



1st, 2nd, 3rd, 4th, 5th and 6th Semester Examination shall be as indicated in Examination & Teaching Scheme (item no 7).

10. CREDIT AND GRADE POINT SYSTEM

The overall evaluation of a student shall be designated in terms of Grade. The abbreviations used in grade computation and the evaluation mechanism and formulae used are as follows:-

Conversion of Marks to Grades and Calculations of SGPA (Grade Point Average) and CGPA (Cumulative Grade Point Average): In the Credit and Grade Point System, the assessment of individual Courses in the concerned examinations will be on the basis of marks only, but the marks shall later be converted into Grades by some mechanism wherein the overall performance of the Learners can be reflected after considering the Credit Points for any given course. However, the overall evaluation shall be designated in terms of Grade. There are some abbreviations used here that need understanding of each and every parameter involved in grade computation and the evaluation mechanism. The abbreviations and formulae used are as follows:-

Abbreviations and Formulae Used

G: Grade

GP: Grade Points

C: Credits

CP: Credit Points

CG: Credits X Grades (Product of credits & Grades)

SGPA = ΣCG : Sum of Product of Credits & Grades points / ΣC : Sum of Credits points

SGPA: Semester Grade Point Average shall be calculated for individual semesters. (It is also designated as GPA)

CGPA: Cumulative Grade Point Average shall be calculated for the entire Programme by considering all the semesters taken together.

Grade Conversion Table and Computation of SGPA and CGPA

Grade Conversion Table (Theory)

SN	Letter Grade	Grade Point	Mark Range	Performance
1	O	9.00 - 10.00	90 - 100	Outstanding
2	A+	8.00 - < 9.00	80 - < 90	Excellent
3	A	7.00 - < 8.00	70 - < 80	Very Good
4	B+	6.00 - < 7.00	60 - < 70	Good
5	B	5.50 - < 6.00	55 - < 60	Above Average
6	C	5.00 - < 5.50	50 - < 55	Average
7	P	4.00 - < 5.00	40 - < 50	Pass
8	F	Below 4	Below 40	Fail

9	AB	0	-	Absent
---	----	---	---	--------

Grade Conversion Table (Practical)

SN	Letter Grade	Grade Point	Mark Range	Performance
1	O	9.00 - 10.00	90 - 100	Outstanding
2	A+	8.00 - < 9.00	80 - < 90	Excellent
3	A	7.00 - < 8.00	70 - < 80	Very Good
4	B+	6.00 - < 7.00	60 - < 70	Good
5	B	5.50 - < 6.00	55 - < 60	Above Average
6	P	5.00 - < 5.50	50 - < 55	Pass
7	F	Below 5	Below 50	Fail
8	AB	0	-	Absent

Computation of SGPA & CGPA:

The UGC recommends the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

i. The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e

$$SGPA (S_i) = \Sigma(C_i \times G_i) / \Sigma C_i$$

where C_i is the number of credits of the i th course and G_i is the grade point scored by the student in the i th course.

ii. The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, i.e.

$$CGPA = \Sigma(C_i \times S_i) / \Sigma C_i$$

where S_i is the SGPA of the i th semester and C_i is the total number of credits in that semester.

iii. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

iv. CGPA to Percentage (%) conversion formula:

$$\text{Percentage (\%)} = (CGPA) \times 10$$

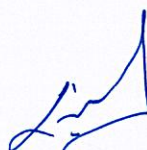
11. **ATKT Rules:** Rules of ATKT shall be as given in the following table:

Admission to academic year	Candidate should have passed All courses of the following examination	Candidate should have filled the examination form	Candidate should have passed in Minimum 50% courses of the following examination
1st Semester	H.S.S.C/equivalent	-----	-----
2nd Semester	-----	1st Semester	-----
3rd Semester	-----	2nd Semester	50% courses of 1st and 2nd Semesters taken together
4th Semester	-----	3rd Semester	As Above
5th Semester	1st and 2nd Semesters	4th Semester	50% courses of 3rd and 4th Semesters taken together
6th Semester*	As Above	5th Semester	As Above

***Note:** For calculating the requirement of fifty percent passing heads, fraction if any is to be ignored as per the provisions of Direction no. 10 of 2019.

a. This Direction shall be made applicable to the students who shall be admitted as regular students in Semester –I of BCCA Part –I from the academic year 2022-2023, and shall be applied to succeeding examinations in phased manner.

b. All the students who had taken admission in BCCA programme under earlier Direction, i.e. 5 of 2020 (Old Course) shall continue to be governed by the said Direction till the New Programme reach the respective semester in natural progression, thereafter students of the old course shall be given FIVE additional chances to clear the backlog, if any, thereafter they shall be absorbed in the New Programme under this Direction as per the absorption scheme Appendix I appended to this Direction.


c. If any question of interpretation of any clause arises for this Direction & Appendix I & II, the same shall be referred to the Dean, Faculty of Commerce and Management whose decision shall be final and binding on all concerned.

12. Saving Clause: The examination and teaching scheme mentioned in this direction shall also be applicable to students admitted to B. Com. (Computer Applications) program under Direction No. 43 of 2022.

Nagpur

Date: 10-10-23

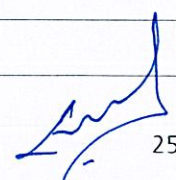


(Dr. Subhash R. Chaudhari)
Vice-Chancellor

APPENDIX – I

List of CC (Core Courses)

SN	Semester	Paper / Subjects
1	Sem I	MS Office (IT)
2		Fundamentals of Computers
3		Practical of tally I & MS Office (IT)
4	Sem II	Principles of Business Management
5		Data Base Management System
6		Practical Tally II
7	Sem III	Business Studies
8		Practical of CSS & Java Script &



		Practical of Statistical Techniques using MS Excel
9	Sem IV	Business Economics
10		Practical (PHP & My SQL)
11	Sem V	Python
12		Internship of 120 Hrs.
13		Practical of Python & Data Visualization
14	Sem VI	Project
15		

List of AE (Ability Enhancement Courses)

SN		
1	AE Ability Enhancement Courses (Sem-I)	English and Business Communication - I
2	AE Ability Enhancement Courses (Sem-II)	English and Business Communication - II
3	AE Ability Enhancement Courses (Sem-III)	Environment Studies and Community Engagement
4		CSS & Java Script
5	AE Ability Enhancement Courses (Sem-V)	Internet of Things

List of SE (Skill Enhancement Courses)

SN		
1	Skill Enhancement Courses Sem-II	E Commerce & Web Designing
2	Skill Enhancement Courses Sem-IV	PHP & My SQL
3	Skill Enhancement Courses Sem-VI	Entrepreneurship Skill Development
4	Skill Enhancement Courses Sem-VI	Web Technology & Multimedia

List of DSE (Discipline Specific Electives)

SN		
1	Discipline specific Elective Sem-IV	Cloud computing OR Artificial Intelligence & Machine Learning OR Management Information System

2	Discipline specific Elective Sem-V	Big Data OR Block chain Technology OR Software Project Management

List of GE (Generic Elective Courses)

SN		
1	Generic Elective Courses Semester-I	Professional Ethics and Human Values OR Personal Wellbeing
2	Generic Elective Courses Semester-III	Ethical Hacking OR Computer Network OR Content Writing & Analysis
3	Generic Elective Courses Semester-IV	Business Law & Cyber Security OR Research Methodology
4	Generic Elective Courses Semester-VI	Digital Marketing OR Company law & secretarial Practices

ABSORPTION SCHEME

B. Com (COMPUTER APPLICATION) (BCCA)

Outcome Based & Choice Based Credit System (OB & CBCS)

From CBS Semester Pattern introduced in Session 2019-20 (referred as Old Course hereafter)
To B.Com. (Computer Application) (BCCA) New (OB & CBCS) introduced from 2022-23.
The failure students of BCCA (old) introduced in 2019-20 will have **five attempts** to clear their
Backlog as below:

BCCA Examination	Attempt – 1	Attempt -2	Attempt -3	Attempt -4	Attempt -5
BCCA – Sem – I	Winter-2021	Summer-2022	Winter-2022	Summer-2023	Winter-2023
BCCA – Sem – II	Summer-2022	Winter-2022	Summer-2023	Winter-2023	Summer-2024

BCCA- Sem – III	Winter-2022	Summer-2023	Winter-2023	Summer-2024	Winter-2024
BCCA- Sem – IV	Summer-2023	Winter-2023	Summer-2024	Winter-2024	Summer-2025
BCCA – Sem – V	Winter-2023	Summer-2024	Winter-2024	Summer-2025	Winter-2025
BCCA -Sem – VI	Summer-2024	Winter-2024	Summer-2025	Winter-2025	Summer-2026

Beyond that they will be absorbed as per scheme mentioned below:

It is notified for general information of all concerned that the failure students of **2019-20 (old Course)** shall be absorbed in the **NEW Course OB & CBCS Semester Pattern** introduced from the session **2022-23 examination with the following scheme.**

1. Those who have completed & passed **B.Com. (Computer Application) (BCCA) Part-I** as per old course introduced in **2019-20** are eligible for admission in the **B.Com. (Computer Application) (BCCA) SEM - III (OB & CBCS) Pattern** introduced from the session **2022-23 (NEW Course).**
2. Failure students of **B.Com. (Computer Application) (BCCA) Part – I** having ATKT as per rules mention in direction No. 12 of 2014, are eligible to take admission in **B.Com. (Computer Application) (BCCA) New SEM - III (OB & CBCS) Pattern** introduced from the session **202-23 (NEW Course).**

Such students will have to compulsorily fill Semester-I and Semester-II exam form and appear for the equivalent papers as mentioned below-

BCCA Part –I

Absorption Scheme B.Com.(Computer Application) BCCA					
OB & CBCS Semester Pattern Introduced in 2022-2023 (New course) with CBS semester pattern Introduced in 2019-2020 (Old course)					
BCCA - PART - I - SEMESTER – I					
Sr. No	OB & CBCS Semester Pattern - (New Course) introduced in 2022-2023	Max Marks	Sr. No	CBS Semester Pattern - (Old Course) introduced in 2019-20	Max Marks
Theory			Theory		

1AE1	English and Business Communication - I	80	1T1	English and Business Communication - I	80
1CC2	MS Office (IT)	80	1T2	Programming in C	80
1CC3	Fundamentals of Computers	80	1T3	Fundamentals of Computer	80
1GE4	Professional Ethics and Human values OR Personal Wellbeing	80	1T4	Financial Accounting	80
Practical			Practical		
1CC5	Practical of Tally 1 & MS Office	100	1P1	Practical - I :(Semester - I) - Fundamentals of Computer & Programming in 'C'	100
All the students absorbed in OB & CBCS pattern course will have to compulsorily fill Semester I and Semester II exam forms and appear for equivalent papers of (New course) as shown above. The student will get updated marksheet as per New scheme.					

Absorption Scheme B.Com.(Computer Application) BCCA					
OB & CBCS Semester Pattern Introduced in 2022-2023 (New course) with CBS semester pattern Introduced in 2019-2020 (Old Course)					
BCCA - PART - I - SEMESTER – II					
Sr. No	OB & CBCS Semester Pattern - (New Course) introduced in 2022-2023	Max Marks	Sr. No	CBS Semester Pattern - (Old Course) introduced in 2019-20	Max Marks
Theory			Theory		
2AE1	English and Business Communication - II	80	2T1	English and Business Communication - II (Sem - II)	80
2CC2	Principles of Business Management	80	2T2	Principles of Business Management	80
2CC3	Database Management System	80	2T3	Programming in C++ (Sem - II)	80

2SE4	E-Commerce and Web Designing	80	2T4	E-Commerce and Web Designing	80
Practical			Practical		
2CC5	Practical of Tally-II	100	1P1	Practical - I : C++ and E Commerce & Web Designing	100
All the students absorbed in OB & CBCS pattern course will have to compulsorily fill Semester I and Semester II exam forms and appear for equivalent papers of New course as shown above. The student will get updated marksheet as per New scheme.					

- Those who have completed & passed **B.Com. (Computer Application) (BCCA) Part-I & B.Com. (Computer Application) (BCCA) Part - II** as per (OLD Course) CBS scheme 2019-20 are eligible for admission in the (New course) (Part – III) Sem – V (OB & CBCS) Introduced in 2022-2023
- Failure students **B.Com. (Computer Application) (BCCA) Part - II** as per (OLD Course) CBS scheme 2019-20 and having ATKT as per rules are eligible to take admission in **OB & CBCS Semester Pattern Introduced in 2022-2023 (New course) (Part – III) Sem – V**. Such students will have to compulsorily fill Semester-III and Semester-IV exam form and appear for the equivalent papers as mentioned below:

K.P.

[Signature]

(A) BCCA Part –II

Absorption Scheme B.Com.(Computer Application) BCCA					
OB & CBCS Semester Pattern Introduced in 2022-2023 (New course) with CBS semester pattern Introduced in 2019-2020 (Old course)					
BCCA - PART - II - SEMESTER – III					
Sr. No	OB & CBCS Semester Pattern - (New Course) introduced in 2022-2023	Max Marks	Sr. No	CBS Semester Pattern - (Old Course) introduced in 2019-20	Max Marks
Theory			Theory		
3AE1	Environmental studies & Community Engagement	80	3T1	Environmental Studies	80
3CC2	Business Studies	80	3T2	Business Economics	80
3AE3	CSS & Java Script	80	3T3	Visual Basic Programming	80
3GE4	Ethical Hacking OR Computer Network OR Content Writing & Analysis	80	3T4	Database Management System	80
Practical			Practical		
3CC5	Practical 1- of CSS & Java Script Practical 2- Statistical Techniques using Excel	100	1P1	Practical - I : Visual Basic Programming- Database Management System	100
All the students absorbed in OB & CBCS pattern course will have to compulsorily fill Semester III and Semester IV exam forms and appear for equivalent papers of (New course) as shown above. The student will get updated marksheet as per New scheme.					



Absorption Scheme B.Com.(Computer Application) BCCA					
OB & CBCS Semester Pattern Introduced in 2022-2023 (New course) with CBS semester pattern Introduced in 2019-2020 (Old course)					
BCCA - PART - II - SEMESTER – IV					
Sr. No	OB & CBCS Semester Pattern - (New Course) introduced in 2022-2023	Max Marks	Sr. No	CBS Semester Pattern - (Old Course) introduced in 2019-20	Max Marks
Theory			Theory		
4CC1	Business Economics	80	4T1	Statistical Techniques	80
4GE2	Business Law & Cyber Security OR Research Methodology	80	4T2	Business Law	80
4DSE3	Cloud Computing OR AI & ML OR MIS	80	4T3	Core Java	80
4SE4	PHP & MySQL	80	4T4	PHP & MySQL	80
Practical			Practical		
4CC5	Practical (PHP & My SQL)	100	1P1	Practical I- PHP MYSQL + Core Java	100
All the students absorbed in OB & CBCS pattern course will have to compulsorily fill Semester III and Semester IV exam forms and appear for equivalent papers of (New course) as shown above. The student will get updated marksheets as per New scheme.					

Failure students of **B.Com. (Computer Application) (BCCA) SEM V (old course)** are having chances upto **Winter 2025** examination (**Last Chance**). So they should appear **B.Com. (Computer Application) (BCCA) SEM V (old course)** examination & is required to clear their backlog. After that those who will have backlog, will have to compulsorily fill Semester-V and Semester-VI exam form of BCCA (New course) and appear for equivalent papers as mention below –

(B) BCCA Part –III

Absorption Scheme B.Com.(Computer Application) BCCA					
OB & CBCS Semester Pattern Introduced in 2022-2023 (New course) with CBS semester pattern Introduced in 2019-2020 (Old course)					
BCCA - PART - III - SEMESTER – V					
Sr. No	OB & CBCS Semester Pattern - (New Course) introduced in 2022-2023	Max Marks	Sr. No	CBS Semester Pattern - (Old Course) introduced in 2019-20	Max Marks
Theory			Theory		
5CC1	Python	80	5T1	VB .Net	80
5AE2	Internet of Things	80	5T2	Tally	80
5DSE3	Big Data OR Block Chain Technology OR Software Project Management	80	5T3	Management Information System/System Analysis and Design	80
5CC4	Internship of 120 hours	80	5T4	Cost & Management Accounting / Corporate Accounting	80
Practical			Practical		
5CC5	Practical of Python & Data Visualization	100	1P1	Practical I-VB .Net and Tally	100
All the students absorbed in OB & CBCS pattern course will have to compulsorily fill Semester V and Semester VI exam forms and appear for equivalent papers of (New course) as shown above. The student will get updated marksheet as per New scheme.					

Absorption Scheme B.Com.(Computer Application) BCCA					
OB & CBCS Semester Pattern Introduced in 2022-2023 (New course) with CBS semester pattern Introduced in 2019-2020 (Old course)					
BCCA - PART - III - SEMESTER – VI					
Sr. No	OB & CBCS Semester Pattern - (New Course) introduced in 2022-2023	Max Marks	Sr. No	CBS Semester Pattern - (Old Course) introduced in 2019-20	Max Marks
Theory			Theory		
6SE1	Web Technology and Multimedia	80	6T1	C#.Net	80
6SE2	Entrepreneurship Skill Development	80	6T2	Entrepreneurship Development / Company Law and Secretarial Practice	80
6GE3	Digital Marketing OR Company Law & Secretarial Practices	80	6T3	Python/ Ruby on Rail	80
Practical			Practical		
6CC4	Project	200		Practical - C#.Net + (Python/ Ruby on Rail) Project	100 100
<p>All the students absorbed in OB & CBCS pattern course will have to compulsorily fill Semester V and Semester VI exam forms and appear for equivalent papers of (New course) as shown above. The student will get updated mark sheet as per New scheme.</p> <p>Case I - If only project (old) is back – Old practical marks credited twice (Double) as (new) project marks in new scheme marksheet.</p> <p>Case II - If Only Practical (old) is back – Old project marks credited twice (Double) as New Project marks in new scheme marksheet.</p> <p>Case III - If both practical (old) & project (old) is back - Student will appear for Project (New) examination only & will get updated project marks in new scheme marksheet .</p>					

Types of Project & Formats:

As majority of the students are expected to work out a project in some industry / research and development laboratories / educational institutions / software/ web companies etc. It is suggested that the project is to be chosen which should have some direct relevance in day-to-day activities of the society. The Applications Areas of project may be Financial / Marketing / Database Management System / Relational Database Management System / E-Commerce / Internet / Manufacturing / web Designing / Scientific / ERP etc. using **CSS/JAVA Script, Website/Web page, Mobile app, Advance Excel & Dashboard PHP My SQL, Python, Data Visualization, Java, Android Programing, WordPress & .NET technologies as tools.**

***Project based on any application development platform/programing language which a student might have learnt in ODL is also allowed.**

***Project to be executed in group of Maximum 4 students.**

Project Proposal (Synopsis)

The project proposal should be prepared in consultation with the guide. The project guide must be a RTM Nagpur university approved teacher. The project proposal should clearly state the objectives and environment of the proposed project to be undertaken. It should have full details in the following form:

Format of Synopsis for Desktop Application

1. Title of the Project.
2. Objectives of the Project.
3. Project Category (DBMS / RDBMS / OOPS etc.)
4. Tools / Platform and Languages to be used.
5. Complete Structure of the System:
 - i. Numbers of Modules and its Description.
 - ii. Modular Chart / System Chart.
 - iii. Data Structures or Tables.
 - iv. Process Logic of each Module.
 - v. Types of Report Generation.
6. References.



Note: Synopsis should not be more than 3 pages.

Format of Synopsis for Web Application

1. Title of the Project.
2. Objectives of the Project.
3. Project Category (DBMS / RDBMS / OOPS etc.).
4. Tools / Platform and Languages to be used.
5. Complete Structure of the System:
 - I. Number of pages and links their short description.
 - II. Use / Information of Pages.
 - III. Feedback Form (if any).
6. References.

Note: Synopsis should not be more than 3 pages.

Project Report Formulation

Front Page.

College Certificate Page.

Declaration Page.

Acknowledgment Page.

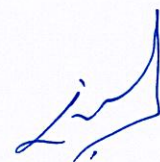
Project Profile.

Index or Content Page.

- I. Appendices
 - I. List Figures, Tables & Charts.
 - II. Approved copy of Synopsis. Glossary
- II. Contents.
 - I. Introduction.
 - II. Objectives.
 - III. Preliminary System Analysis.
 - Preliminary Investigation.
 - Present System in Use.
 - Flaws in Present System.
 - Need of New System.



- Feasibility Study.
 - Project Category.
- IV. Software Engineering Paradigm Applied
- Modules
 - System / Modular Chart.
- V. Software & Hardware Requirement Specification.
- VI. Detailed System Analysis.
- Data Flow Diagram.
 - Numbers of Modules and Process Logic.
 - Data Structures and Tables.
 - Entity-Relationship Diagram.
- VII. System Design.
- Form Design.
 - Source Code.
 - Input screen & Output Screen.
- VIII. Testing & Validation Checks.
- IX. System Security Measures.
- X. Implementation, Evaluation and Maintenance.
- XI. Future Scope of the project.
- XII. Suggestion & Conclusion
- XIII. Bibliography & References.



The Project certificate template shall be as follows:

Name of the college/ Institution

Name of the department

CERTIFICATE

This is to certify that Mr./Mrs./Ms. _____ of
class BCCA IIIrd Year Semester-VI, has satisfactorily completed the Project prescribed by The
Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur for the subject Project (**Project Title -**
_____ during the academic
year 20 - 20 .

Signature

Signature

Project Guide

Head of the Department

Signature

Signature

Internal Examiner

External Examiner

Date -



The Practical certificate template shall be as follows:

Name of the college/ Institution

Name of the department

CERTIFICATE

This is to certify that Mr./Mrs./Ms. _____ of class
BCCA Semester -----, has satisfactorily completed the practical assignments prescribed by
The Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur for the **Practical Subject -**
_____ during the academic year 20 - 20

Signature

Signature

Practical In-charge

Head of the Department

Signature

Signature

Internal Examiner

External Examiner

Date -



