



**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY**  
**M.Sc. THIRD SEMESTER (CBCS) (OLD) EXAMINATION OF WINTER 2024**  
**-:PROGRAMME (WRITTEN):-**  
**TIME:-9.30 A.M. TO 12.30 P.M.**

Sr. No	Subject	Day Date Paper	Tuesday 10-12-2024 I	Thursday 12-12-2024 II	Saturday 14-12-2024 III	Monday 16-12-2024 IV
1.	Physics		Quantum Mechanics II	Solid State Physics and Spectroscopy	<b>Elective</b> 1. Materials Science – I 2. X-rays – I 3. Nanoscience and Nanotechnology – I 4. Atomic and Molecular Physics– I 5. Applied Electronics – I 6. Methods of Theoretical Physics –I 7. Nonlinear Dynamics-I	<b>FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS</b> Fundamentals of Spectroscopy Fundamentals of Nanoscience and Nanotechnology <b>Subject Centric Core</b> : Solid Earth Geophysics <b>Subject Centric Core</b> : Nanoscience And Nanotechnology <b>Subject Centric Core</b> : Quantum Computing <b>Subject Centric Core</b> : Digital Electronics And Micro processor
2.	Chemistry		Special I – Inorganic / Organic / Physical / Analytical	Special II – Inorganic / Organic / Physical / Analytical	Elective –Nuclear / Environmental / Polymer / Medicinal	<b>FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS</b> Applied Analytical Chemistry-I <b>Core(Subject Centric) Spectroscopy-I</b>
3.	Bio-Chemistry		Advanced Molecular Biology	Biotechnology	A) Toxicology (Biochemical & Environmental Toxicology) <b>OR</b> B) Nutrition (Nutritional Biochemistry)	Biomolecules and Basic Metabolism <b>OR</b> <b>Core (Subject Centric) Bioresearch Techniques-I</b>
4.	Microbiology		Molecular Biology and Genetics (MBG)	Recombinant DNA Technology and Nanobiotechnology (RDTN)	<b>Elective</b> 1) Microbial Diversity, Evolution and Ecology (MDEE)-I <b>OR</b> 2) Bioinformatics (BIF)-I	<b>FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS</b> General Microbiology(GM) <b>OR</b> <b>Core (Subject Centric)</b> Drugs And Disease Management (DDM)-I
5.	Botany		Plant Ecology and Conservation Biology	Angiosperms-II	<b>Elective</b> 1) Molecular Biology and Plant Biotechnology 2) Reproductive Biology of Angiosperms 3) Advanced Phychology and Hydrobiology 4) Mycology and Plant Pathology 5) Palaeobotany 6) Palynology 7) Plant Physiology	<b>FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS</b> 1) General Botany <b>Subject Centric</b> 1) Aesthetic Botany
6.	Zoology		Parasitology & Immunology	<b>Special Group – Paper – I</b> Entomology Fish and Fisheries Mammalian Reproductive Physiology (MRP) Animal Physiology Cell Biology Fresh Water Zoology Aquaculture Environmental Biology Sericulture	<b>Special Group – Paper – II</b> Entomology Fish and Fisheries Mammalian Reproductive Physiology Animal Physiology Cell Biology Fresh Water Zoology Aquaculture Environmental Biology Sericulture	<b>FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS</b> Elementary Zoology Basic Entomology Fresh Water Fisheries Human Physiology <b>Core (Subject Centric)-I</b> Wild Life Avian Biology

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7.	Geology	Hydrogeology & Watershed Management (3+1)	Geomorphology, Remote Sensing and GIS (1+2+1)	<b>Elective</b> 1. Mining Geology And Mineral Exploration(1+3) 2. Applied And Industrial Micropaleontology 3. Petroleum Exploration	<b>FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS</b> Introduction to Geology <b>OR</b> <b>Core (Subject Centric)</b> Environmental Geology & Engineering Geology (2+2)	
8.	Environmental Science	Physico – Chemical Treatment of Water & Waste Water	Biological Process in Wastewater Treatment	<b>Elective</b> Water & Water Treatment <b>OR</b> Water Supply and Resources	<b>FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS</b> 1. Fundamentals of Environment Science –I <b>Core (Subject Centric)</b> 2. Advance Water & Wastewater Treatment	
9.	Mathematics	Complex Analysis	Functional Analysis	Mathematical Methods	<b>FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECT</b>  1. Elementary Mathematics  <b>Core (Subject Centric)</b> Operations Research – I  <b>Paper V:- Wednesday 18-12-2024</b> <b>Core Elective Paper (opt any one of the following)</b> 1. Fluid Dynamics – I 2. General Relativity 3. Algebraic Topology-I 4. Measure and Integration Theory 5. Number Theory	
10.	Electronics	Network Analysis and Synthesis	Fuzzy Logic and Artificial Neural Networks	<b>Elective</b> Digital Signal Processing Digital Image Processing	<b>FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS</b> Basic Electronics <b>Core (Subject Centric)</b> Mechatronics	
11.	Computer Science	Data Communication and Networks	Software Engineering	<b>Elective</b> 1. Neural Network 2. Multimedia Technologies 3. ASP. NET	<b>FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS</b> Operating System Concepts Principles of Management E-Business <b>Core (Subject Centric)</b> Mobile Computing <b>Core (Subject Centric)</b> Digital & Cyber Forensics	
12.	Information Technology	Data Communication and Networks	Software Engineering	<b>Elective</b> 1. Soft Computing 2. Distributed Databases 3. Object Oriented Analysis and Design using UML	<b>FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS</b> Operating System Concepts Principles of Management E- Business <b>Core (Subject Centric)</b> CORBA <b>Core (Subject Centric)</b> Digital & Cyber Forensics CORBA	

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13.	Biotechnology		Genetic Engineering & its Application	Plant Biotechnology	<b>Elective</b> A) Industrial Biotechnology I <b>OR</b> B) Environmental Biotechnology I	<b>FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS</b> Introductory Biotechnology <b>OR</b> <b>Core (Subject centric)</b> Diagnostic Medical Biotechnology
14.	<b>Forensic Science (NEW COURSE)</b>		Criminology and Forensic Law	<u><b>Any One out of the following Special</b></u>  1. Questioned Documents Analysis-I 2. Forensic Biology and Entomology 3. Instrumentation 4. File system 5. Instrumentation in Forensic Physics	<u><b>Any One out of the following Special</b></u>  1. Forensic Serology 2. Advanced Fingerprint Development Method-I 3. Advanced Forensic Chemistry 4. Digital Image Processing 5. Internal Ballistics	<b>FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS</b> Applied Analytical Chemistry-I <b><u>Paper V:- Wednesday 18-12-2024</u></b> <u><b>Any One out of the following Special</b></u> 1. Advanced Forensic Toxicology 2. Forensic Linguistics and Stylistics 3. DNA Fingerprinting 4. Network Forensics 5. External Ballistics <b><u>Paper VI:- Friday 20-12-2024</u></b> <u><b>Any One out of the following Special</b></u> 1. Applied Cryptography 2. Forensic Photography 3. Forensic Pathology and Microbial Forensic 4. Advanced Chemistry 5. Terminal Ballistics
15.	<b>M.Sc. Tech.</b> Applied Geology		Instrumentation Techniques, Geostatistics and Computer Application in Geology	Indian Mineral Deposits and Mineral Economics	Ore Geology	Mining Geology & Valuation of Mineral Property

**FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS**

**List of Foundation Subjects for P.G.**

Sr.No.	Subject	4 <sup>th</sup> Papers of Semester- 3
1	Mathematics	Mathematics-I
2	Physics	Physics-I
3	Chemistry	Chemistry-I
4	Bio-Technology (Ad-hoc)	Bio-Technology-I
5	Computer Science	Computer Science-I
6	Environmental Science	Environmental Science-I
7	Botany	Botany-I
8	Zoology	Zoology-I

9	Statistic	Statistics-I
10	Business Management	Business Management -I
11	Accountancy	Account & Statistics-I
12	Managerial Skill	Managerial Skills-I
13	Education Technology & Management Skills	Education Technology & Management Skills-I
14	Communication Skill	Communication Skills-I
15	Sanskrit	Sanskrit-I
16	German	German-I
17	French	French-I
18	Law	Law-I
19	Pharmaceutical Sciences	Pharmaceutical Sciences-I
20	Life skills	Life Skills-I
21	Economics	Economics-I
22	Political Science	Political Science-I
23	Sociology	Sociology-I
24	Psychology	Psychology-I
25	Philosophy	Philosophy-I
26	History	History-I
27	Public Admn	Public Admn -I
28	Buddhist Studies	Buddhist Studies-I
29	Gandhian Thought	Gandhian Thought-I
30	Dr. Ambedkar Thought	Dr. Ambedkar Thought-I
31	Rashtrasant Tukdoji Maharaj Thought	Rashtrasant Tukdoji Maharaj Thought-I
32	Travel & Tourism	Travel & Tourism-I
33	Personality Development	Personality Development-I
34	Cosmetic Technology	Cosmetic Technology-I
35	Hospitality Management	Hospitality Mgt. -I
36	Chemical Engineering	Chemical Engineering-I
37	Chemical Technology	Chemical Technology-I
38	Civil Engineering	Civil Engineering-I
39	Electrical Engineering	Electrical Engineering-I

40	Mechanical Engineering	Mechanical Engineering-I
41	Electronics Engineering	Electronics Engineering-I
42	Pali Prakrit	Pali Prakrit-I

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**GENERAL INSTRUCTIONS FOR SEATING ARRANGEMENT**

The name of the College Centre is already printed on the Admission Card of each candidate. However, it is notified for general information of the candidates that :-

The seating arrangement for the Centre will be notified separately seven days prior to the commencement of the written examination at the respective College / Centre. The candidates concerned will also be able to get the necessary information from that chart of seating arrangement sent to the concerned College by University.

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**Nagpur**

**Date: 29<sup>th</sup> October 2024**

**Sd/-**  
**Director**  
**Board Of Examination & Evaluation**  
**Rashtrasant Tukadoji Maharaj**  
**Nagpur University**