



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

M.Sc. THIRD SEMESTER (C B C S) EXAMINATION OF SUMMER, 2020

-: PROGRAMME (WRITTEN) :-

TIME : 2.30 P.M. TO 5.30 P.M.

Sr. No	Subject	Day Date Paper	Saturday 04-04-2020 I	Tuesday 07-04-2020 II	Thursday 09-04-2020 III	Saturday 11-04-2020 IV
1.	Physics	Quantum Mechanics II	Solid State Physics and Spectroscopy	Elective 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	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS Fundamentals of Spectroscopy Fundamentals of Nanoscience and Nanotechnology Subject Centric Core : Solid Earth Geophysics Subject Centric Core : Nanoscience And Nanotechnology Subject Centric Core : Quantum Computing Subject Centric Core : Digital Electronics And Micro processor	
2.	Chemistry	Special I – Inorganic / Organic / Physical / Analytical	Special II – Inorganic / Organic / Physical / Analytical	Elective –Nuclear / Environmental / Polymer / Medicinal	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS Applied Analytical Chemistry-I Core(Subject Centric) Spectroscopy-I	
3.	Bio-Chemistry	Advanced Molecular Biology	Biotechnology	A) Toxicology (Biochemical & Environmental Toxicology) OR B) Nutrition (Nutritional Biochemistry)	Biomolecules and Basic Metabolism OR Core (Subject Centric) Bioresearch Techniques-I	
4.	Microbiology	Molecular Biology and Genetics (MBG)	Recombinant DNA Technology and Nanobiotechnology (RDTN)	Elective 1) Microbial Diversity, Evolution and Ecology (MDEE)-I OR 2) Bioinformatics (BIF)-I	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS General Microbiology(GM) OR Core (Subject Centric) Drugs And Disease Management (DDM)-I	
5.	Botany	Plant Ecology and Conservation Biology	Angiosperms-II	Elective 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	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS 1) General Botany Subject Centric 1) Aesthetic Botany	
6.	Zoology	Parasitology & Immunology	Special Group – Paper – I Entomology Fish and Fisheries Mammalian Reproductive Physiology (MRP) Animal Physiology Cell Biology Fresh Water Zoology Aquaculture Environmental Biology Sericulture	Special Group – Paper – II Entomology Fish and Fisheries Mammalian Reproductive Physiology Animal Physiology Cell Biology Fresh Water Zoology Aquaculture Environmental Biology Sericulture	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS Elementary Zoology Basic Entomology Fresh Water Fisheries Human Physiology Core (Subject Centric)-I Wild Life Avian Biology	

Sr. No	Subject	Day Date Paper	Saturday 04-04-2020 I	Tuesday 07-04-2020 II	Thursday 09-04-2020 III	Saturday 11-04-2020 IV
7.	Geology	Hydrogeology & Watershed Management (3+1)	Geomorphology, Remote Sensing and GIS (1+2+1)	Elective 1. Mining Geology And Mineral Exploration(1+3) 2. Applied And Industrial Micropaleontology 3. Petroleum Exploration	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS Introduction to Geology OR Core (Subject Centric) Environmental Geology & Engineering Geology (2+2)	
8.	Environmental Science	Physico – Chemical Treatment of Water & Waste Water	Biological Process in Wastewater Treatment	Elective Water & Water Treatment OR Water Supply and Resources	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS 1. Fundamentals of Environment Science –I Core (Subject Centric) 2. Advance Water & Wastewater Treatment	
9.	Statistics	Decision Theory and Non Parametric Methods	Linear and Nonlinear Modeling	Elective 1. Mathematical Programming (Old) 2. Computer Programming 3. Survival Analysis 4. Bioassay 5. Demogarchy 6. Time Series Analysis 7. Industrial Process And Quality Control (New)	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS Statistics –I Biostatistics-I Core (Subject Centric) 1. Industrial Process And Quality Control (Old) 2. Statistical Ecology 3. Statistical Genetics 4. Mathematical Statistics 5. Data Mining 6. Mathematical Programming (New)	
9.	Statistics	Decision Theory and Non Parametric Methods	Linear and Nonlinear Modeling	Elective 8. Mathematical Programming 9. Computer Programming 10. Survival Analysis 11. Bioassay 12. Demography 13. Time Series Analysis	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS Statistics –I Biostatistics-I Core (Subject Centric) 7. Industrial Process And Quality Control 8. Statistical Ecology 9. Statistical Genetics 10. Mathematical Statistics 11. Data Mining	
10.	Mathematics	Complex Analysis	Functional Analysis	Mathematical Methods	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS (Opt any one of the following) 1. Elementary Mathematics 2. Elementary Mathematical Method 3. Elementary Numerical Method 4. Fuzzy Mathematics I Core (Subject Centric) Operations Research – I Paper V:- Monday , 13-04-2020 Core Elective Paper (opt any one of the following) 1. Fluid Dynamics – I 2. General Relativity 3. Algebraic Topology-I	

					4. Non-Linear Programming-I 5. Operator Theory	
11.	Electronics	Network Analysis and Synthesis	Fuzzy Logic and Artificial Neural Networks	Elective Digital Signal Processing Digital Image Processing	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS Basic Electronics Core (Subject Centric) Mechatronics	
Sr. No	Subject	Day Date Paper	Saturday 04-04-2020 I	Tuesday 07-04-2020 II	Thursday 09-04-2020 III	Saturday 11-04-2020 IV
12.	Computer Science	Data Communication and Networks	Software Engineering	Elective 1. Neural Network 2. Multimedia Technologies 3. ASP. NET	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS Operating System Concepts Principles of Management E-Business Core (Subject Centric) Mobile Computing Core (Subject Centric) Digital & Cyber Forensics	
13.	Molecular Biology and Genetic Engineering	Industrial Application of Genetic Engineering	Recombinant DNA Technology-I	Elective 1. Molecular Diagnostics Methods	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS 1. Biostatics/French/German/Communication Skill-I 2. Core (Subject Centric) Personality Development Through Fine Art	
14.	M.Sc. Tech. Applied Geology	Instrumentation Techniques, Geostatistics and Computer Application in Geology	Indian Mineral Deposits and Mineral Economics	Ore Geology	Mining Geology & Valuation of Mineral Property	
15.	Information Technology	Data Communication and Networks	Software Engineering	Elective 1. Soft Computing 2. Distributed Databases 3. Object Oriented Analysis and Design using UML	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS Operating System Concepts Principles of Management E- Business Core (Subject Centric) CORBA Core (Subject Centric) Digital & Cyber Forensics CORBA	
16.	Biotechnology	Genetic Engineering & its Application	Plant Biotechnology	Elective A) Industrial Biotechnology I OR B) Environmental Biotechnology I	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS Introductory Biotechnology OR Core (Subject centric) Diagnostic Medical Biotechnology	
17.	Forensic Science	Instrumentation Quality Management, Research Methodology and Statistics	Special – I : Questioned Documents Analysis Special – I : Advanced forensic Toxicology	Special – II : Advanced Fingerprint Development Methods Special – II : Advanced Forensic Chemistry	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS Applied Analytical Chemistry-I Paper V:- Monday, 13-04-2020 Special – I :Forensic Serology	

					Special – I : Operating System and Web Security Paper VI:- Wednesday, 15-04-2020 Special – II : Forensic Biology Special – II : Advanced Computer Network and Network Security
18.	Medicinal Plants	Immunology and Microbiology	Herbal Cosmetics	Core Elective Natural Plant Products & Phytochemistry -I OR Forensic and Industrial Botany-I	FOR FOUNDATION COURSE OPTIONAL – AS PER ENCLOSED LIST OF FOUNDATION COURSES OF 42 SUBJECTS Fermentation Technology OR Core Subject Centric Cultivation and Utilization of Medicinal Plants

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 th 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

GENERAL INSTRUCTIONS FOR SEATING ARRANGEMENT

The name of the Examination 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 Examination Centre will be notified separately seven days prior to the commencement of the written examination at the respective Examination Centre. The candidates concerned will also be able to get the necessary information about his/her Examination Centre from the concerned College of the candidate.

Nagpur

Date: 15th January 2020

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

M.Sc. Tech. 5th Sem.,(CBCS) SUMMER, 2020
(236)

M.Sc. Tech. (APPLIED GEOLOGY) 5TH SEMESTER(CBCS) EXAMINATION OF SUMMER, 2020
-: PROGRAMME (WRITTEN) :-
TIME : 9.30 A.M. TO 12.30 P.M.

Sr. No	Subject	Day Date Paper	Thursday 19-03-2020 I	Saturday 21-03-2020 II	Monday 23-03-2020 III	Thursday 26-03-2020 IV
1	M.Sc. TECH. Applied Geology	Ore Microscopy and Ore Dressing (1+3)		Hydrogeology and Watershed Management (3+1)	Core Elective 1 Optional (Any One) 1. Exploration Geochemistry (4) 2. Quaternary Geology and Limnogeology (3+1)	Foundation Coures 1 Introduction to Geology OR Core (Subject Centric)1 Environmental Geology & Geohazards

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Nagpur

Date: 15th January 2020

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Director
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