



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

M.Sc. 4Th SEMESTER (C B C S) EXAMINATION OF WINTER, 2017

-: PROGRAMME (WRITTEN) :-

TIME : 2. 00 P.M. TO 5. 00 P.M.

| Sr. No | Subject | Day Date Paper | Tuesday 03-10-2017 I | Thursday 05-10-2017 II | Saturday 07-10-2017 III | Tuesday 10-10-2017 IV |
|--------|---------------|----------------|---|--|--|---|
| 1. | Physics | | Nuclear and Particle Physics | Solid State Physics | Core Elective 1. Materials Science – II 2. X-rays – II 3. Nanoscience and Nanotechnology – II 4. Atomic and Molecular Physics– II 5. Applied Electronics – II 6. Methods of Theoretical Physics –II 7. Nonlinear Dynamics-II | Foundation Course Spectroscopic Application OR Optics and Optical Instruments Subject Centric Core 1. Nonlinear Geophysics 2. Experimental Techniques In Physics 3. Communication Electronics 4. Electro Acoustics |
| 2. | Chemistry | | Special I – Inorganic / Organic / Physical / Analytical | Special II – Inorganic / Organic / Physical / Analytical | Elective –Nuclear / Environmental / Polymer / Medicinal | Foundation Course- Applied Anal. Chemistry-II Core Subject Centric- Spectroscopy-II |
| 3. | Bio-Chemistry | | Advanced Clinical Biochemistry | Advanced Immunology | Elective A) Toxicology OR B) Nutrition (Applied Nutritional Biochemistry) | Foundation Enzyme Technology Core Subject Centric Bioresearch Technology |
| 4. | Microbiology | | Virology(VIR) | Microbial Fermentation Technology (MFT) | Elective :- Any One Of The Following 1) Microbial Diversity, Evolution and Ecology (MDEE) 2) Bioinformatics (BIF) | Foundation Course :- Any One Of The Following 1. Advance Microbiology Core Subject Centric Vaccines And Delivery System |
| 5. | Botany | | Cell and Molecular Biology-II | Plant Biotechnology and Plant Breeding | 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 | Foundation Course 1) Applied Botany Core Subject Centric- Plant Resources |
| 6. | Zoology | | Biotechnique, Biostatistics ,Ethology,Toxicology and Bioinformatics | Special Group – Paper – II Elective Entomology Fish and Fisheries Mammalian Reproductive Physiology (MRP) Animal Physiology Cell Biology Fresh Water Zoology Aquaculture Environmental Biology Sericulture | Special Group – Paper – III Elective Entomology Fish and Fisheries Mammalian Reproductive Physiology(MRP) Animal Physiology Cell Biology Fresh Water Zoology Aquaculture Environmental Biology Sericulture | Foundation Applied Zoology Applied and Industrial Entomology Applied Fresh Water Fisheries Applied Human Physiology Core Subject Centric -2 Chronobiology & Radiation Biology |

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|--------|-----------------------|--|---|--|---|-----------------------|
| 7. | Environmental Science | Air and Noise Pollution Control Technology | Solid and Hazardous Waste Management | Elective - I Environment Impact Assessment and Legislation Elective –II Environmental Management | Foundation I Fundamentals of Environmental Science-II | |
| 8. | Statistics | Multivariate Analysis | Computational Statistics | Elective Operation Research Reliability Theory Data Mining Time Series Analysis | Core Subject Centric Industrial Statistics Actuarial Statistics Stochastic Models In Finance Statistical Pattern Recognition Foundation Applied Statistics Bio-Statistics | |
| 09. | Mathematics | Dynamical Systems | Partial Differential Equations | Advanced Numerical Methods | Core Elective Paper (opt any one of the following) 1. Fluid Dynamics – II 2. Cosmology Paper V:- Thursday, 12-10-2017 Foundation Paper (opt any one of the following) 1. Elementary Discrete Mathematics 2. Fuzzy Mathematics II 3. Linear Programming Core (Subject Centric) .Operations Research II | |
| 10. | Electronics | Electromagnetic Fields and Antennas | Digital Communications | Elective 1. Microwave and Optical Communication 2. Computer Communication | Foundation Course : Pc and Pc Interfacing Core (Subject Centric) Mobile and Satellite Communication | |
| 11. | Computer Science | Data Mining | Artificial Intelligence & Expert System | Elective Design and Analysis of Algorithm Embedded System Pattern Recognition | Foundation Course II Advances in Information Technology Enterprise Resource Planning Supply Chain Management Total Quality Management Banking Operation And Services Information Security And Cyber Law Subject Centric 1. Parallel Computing 2. Mobile and Cyber Forensics | |
| 12. | Sericulture | Mulberry Silk Technology | Non- Mulberry Silk Technology | Elective A) Economics of Sericulture and Trading of Silk OR B) Extension, Management and Product Analysis | Insect Cell Culture & Molecular Informatics Technology | |

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| 13. | Molecular Biology and Genetic Engineering | Plant & Animal Tissue Culture | | Recombinant DNA Technology-II | Elective A) Plant Genetic Engineering B) Molecular Diagnostics C) Bioinformatics and Datamining | Foundation Course Biostatistics Core Subject Centric Personality Development Through Fine Arts |
| 14. | M.Sc. Tech. Applied Geology | Mineral Exploration (4) | | Elements of Mining and Drilling Techniques(3+1) | Geomorphology, Remote Sensing and GIS(1+2+1) | Fuel Geology (Coal, Petroleum and Nuclear) (2+1+1) |
| 15. | Information Technology | Data Warehousing and Data Mining | | Artificial Intelligence and Expert System | Core Elective 1. Design and Analysis of Algorithm 2. Cloud Computing 3. Mobile Computing | Foundation 1. Advances in Information Technology 2. Banking Operations and Services 3. Information Security and Cyber Law Core Subject Centric 1. Enterprise Computing 2. Mobile and Cyber Forensics |
| 16. | Biotechnology | Animal Biotechnology | | Biostatistics, Bioinformatics, Ethics & Patenting | Elective A) Industrial Biotechnology II OR B) Environmental Biotechnology II | Foundation Molecular Biotechnology Core Subject Centric Therapeutic Medical Biotechnology |
| 17 | Geology | Ore Geology and Ore Microscopy (3+1) | | Indian Mineral Deposits and Mineral Economics (3+1) | Elective 1. Exploration Geochemistry (4) 2. Quaternary Geology & Limnogeology(3+1) 3. Basin Analysis and Sequence Stratigraphy(2+2) 4. Marine Geology and Oceanography(2+2) | Foundation Course Paleobiology Core (Subject Centric) Fuel Geology (Coal, Petroleum & Nuclear) |

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: 30th June, 2017.

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