



राष्ट्रीय प्रौद्योगिकी संस्थान, दुर्गापुर
महात्मा गांधी एवेन्यू, दुर्गापुर-713209
NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR
MAHATMA GANDHI AVENUE, DURGAPUR-713209

(An Institute of National Importance of the Govt. of India under Ministry of Education (Shiksha Mantralaya))

Selection Process and Syllabus for the multiple Non-Teaching vacancies advertised by this Institute against the Advertisement No. NITD/Estt./01/10/Non-Teaching/2020 dated 9th December 2020 and NITD/Estt./01/12/Non-Teaching/2020/2021 Date: 22.12.2021.

Note: Institute reserves the right to increase or decrease the no. of phase(s) of selection process depending upon the no. of shortlisted candidates. The venue & date of Interview/ Written Test will be communicated in due course of time. The medium of questions shall be English only.

Advertisement No. NITD/Estt./01/10/Non-Teaching/2020 dated 9th December 2020 and NITD/Estt./01/12/Non-Teaching/2020/2021 Date: 22.12.2021		
Post Code & Name of the Post	Scheme of the Examination/ Selection Process	Syllabus
O-01 Principal Scientific/ Technical Officer	Presentation (not exceeding 5 slides and 7 minutes) followed by the Personal Interview. <u>Final Merit will be prepared on the basis of performance in the Personal Interview.</u>	Presentation slides may cover the following: 1. Educational background, skill-sets and experience 2. How is experience relevant to the post.
O-02 Superintending Engineer	Presentation (not exceeding 5 slides and 7 minutes) followed by the Personal Interview. <u>Final Merit will be prepared on the basis of performance in the Personal Interview.</u>	Presentation slides may cover the following: 1. Educational background, skill-sets and experience 2. How is experience relevant to the post.
O-03 Deputy Librarian	Phase I: Written Test: Computer based MCQs Type (Time: 01 Hour, Maximum Marks:50)- Candidates qualified in this test will be called for Phase-II. Phase II: Presentation (not exceeding 5 slides and 7 minutes) followed by the Personal Interview. <u>Final Merit will be prepared on the basis of performance in the Phase II.</u> Phase I and Phase II shall be held on the same day. The next day shall be	<u>Syllabus for Phase I:</u> a. Library Management & Library Computer Application. b. IPR- Intellectual Property Rights c. RTI: Right to Information & RTI act 2005 d. General English <u>Presentation slides may cover the following:</u> 1. Educational background, skill-sets and experience 2. How is experience relevant to the post.

	kept as reserve in case of no. of candidates are more for phase II.	
O-04 Senior Scientific/ Senior Technical officer	<p>Phase I: Written Test: Computer based MCQs Type (Time: 01 Hour, Maximum Marks:50)- Candidates qualified in this test will be called for Phase-II.</p> <p>Phase II: Written Test: Computer based MCQs Type (Time 02 Hour, Maximum Marks: 100)- Candidates qualified in this test will be called for Phase-III.</p> <p>Phase III: Presentation (not exceeding 5 slides and 7 minutes) followed by the Personal Interview.</p> <p><u>Phase I and II are for the purpose of screening. Final Merit will be prepared on the basis of performance in the Phase III only.</u></p> <p>Phase I and Phase II shall be held on the same day. Phase III shall be held on the consecutive day. The next(third) day shall be kept as reserve in case, the no. of candidates are more for phase III.</p>	<p><u>Syllabus for Phase I (Questions shall be up to the level of graduation):</u> Reasoning & Numerical Ability, General English, General Knowledge, Computer Fundamentals, current affairs.</p> <p><u>Syllabus for Phase II: Part A: (Science upto the level of 10+2):</u> Mathematics, Physics, Chemistry, Biology, Computer Science (Detailed Syllabus in Annexure I at the end of this document)</p> <p>Part B: E-Governance, Fundamentals of Information and Communication Technology, Basics of latest trend in IT such as Artificial Intelligence, Blockchain Technology, Office Automation, Enterprise Resource Planning, Fundamentals of research methodology and data collection, GFR 2017, GeM, NEP-2020.</p> <p><u>Phase III: Presentation slides may cover the following:</u> 1. Educational background, skill-sets and experience 2. How is experience relevant to the post.</p>
O-05 Scientific Officer/ Technical Officer	<p>Phase I: Written Test: Computer based MCQs Type (Time: 01 Hour, Maximum Marks:50)- Candidates qualified in this test will be called for Phase-II.</p> <p>Phase II: Written Test: Computer based MCQs Type (Time 02 Hour, Maximum Marks: 100) Candidates qualified in this test will be called for Phase-III.</p> <p>Phase III: Personal Interview</p> <p><u>Final Merit = 40% of marks obtained in Phase-II + 60% of marks obtained in Phase-III</u></p> <p>Phase I and Phase II shall be held on the same day. Phase III shall be held on the consecutive day. The next(third) day shall be kept as reserve in case, the no. of candidates are more for phase III.</p>	<p><u>Syllabus for Phase I (Questions shall be up to the level of graduation):</u> Reasoning & Numerical Ability, General English, General Knowledge, Computer Fundamentals, current affairs.</p> <p><u>Syllabus for Phase II: Part A: (Science upto the level of 10+2):</u> Mathematics, Physics, Chemistry, Biology, Computer Science (Detailed Syllabus in Annexure I at the end of this document)</p> <p>Part B: E- Governance, Basics of Information Technology, Office Automation, Basics of System maintenance and troubleshooting, Cybersecurity, GFR 2017, GeM.</p> <p>Phase III: Personal Interview</p>
O-06 Assistant Registrar	<p>Phase I: Written Test: Computer based MCQs Type (Time: 01 Hour, Maximum Marks:50)- Candidates qualified in this test will be called for Phase-II.</p>	<p><u>Syllabus for Phase I (Questions shall be up to the level of graduation):</u> English Language: Reading Comprehension, Word usage and Vocabulary Based Questions, Antonyms, Synonyms, Spelling Check, Active/Passive</p>

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	<p>Phase II: Written Test: Computer based MCQs Type (Time 02 Hour, Maximum Marks: 100) - Candidates qualified in this test will be called for Phase-III.</p> <p>Phase III: Personal Interview-</p> <p><u>Phase I and II are for the purpose of screening.</u></p> <p><u>Final Merit will be prepared on the basis of performance in the Phase III only.</u></p> <p>Phase I and Phase II shall be held on the same day. Phase III shall be held on the consecutive day. The next(third) day shall be kept as reserve in case, the no. of candidates are more for phase III.</p>	<p>Voice, Spotting Errors, Sentence Improvement, One Word Substitutes, Selecting Words, Sentence Corrections, Idioms and Phrases, Common Error Detection, Ordering of Words, Verbal Analogies, Sentence Formation, Completing Statements, Change of Speech.</p> <p>Numerical Ability and Reasoning; Computer Fundamentals; General Knowledge; current affairs.</p> <p><u>Syllabus for Phase II:</u> Question based on topics including CCS (CCA) Rules 1965, CCS conduct rules, Central government service Rules, Office procedure, Deputation/ Lien rules, Children Education Allowance/ HRA/TA/LTC Rules, Central Services (Medical Attendance) Rules 1944, Advances to staff, RTI Act 2005, Manual of Office Procedure, Types of official correspondence, Disciplinary & Vigilance authorities, rules and functions; CCS Leave Rules 1972, GPF/CPF/NPS Rules and Procedure, NEP-2020, NIT Acts and statutes, role and functions of BoG, Finance Committee, Building and Works Committee, Senate and NIT Council, Powers and Functions of Director, Registrar, Deans, HoD's/ HoC's, Recruitment Rules/ Procedure etc. CCS (Pension) Rules 1972; National Pension Scheme, GST rules & procedure. Public Procurement, GeM Rules and procedure, Procurement of goods and services; GFR-2017, Inventory management, Role of DDO, Income tax, Service tax rules, Procurement of goods and services, contract management, audit of autonomous bodies, C&AG etc, balance sheet, trial balance, ledgers and posting, bank reconciliation statement, receipt & Payments, preparation of budget and its allocation, GPF rules etc., IPR: Intellectual Property Rights.</p> <p>Phase III: Personal Interview</p>
O-07 Senior SAS Officer	<p>Phase I: Written Test: Computer based MCQs Type (Time: 01 Hour, Maximum Marks:50)- Candidates qualified in this test will be called for Phase-II.</p> <p>Phase II: Written Test: Computer based MCQs Type (Time 02 Hour, Maximum Marks: 100)- Candidates qualified in this test will be called for Phase-III.</p> <p>Phase III: Presentation (not exceeding 5 slides and 7 minutes) followed by the Personal Interview.</p> <p><u>Phase I and II are for the purpose of screening.</u></p> <p><u>Final Merit will be prepared on the basis of performance in the Phase III only.</u></p> <p>Phase I and Phase II shall be held on the same day.</p>	<p><u>Syllabus for Phase I (Questions shall be up to the level of graduation):</u></p> <p>English Language, Numerical Ability and Reasoning, Computer Fundamentals, General Knowledge, current affairs.</p> <p><u>Syllabus for Phase II:</u> Question based on topics including Exercise Physiology, Scientific Principles of Sports Training Test, Measurement, and Evaluation in Physical Education, Applied Statistics in Physical Education and Sports Science, Sports Journalism and Mass Media, Sports Management, Sports Medicine, Health Education and Sports Nutrition, Fitness and Wellness, Yoga, Sports Psychology and Sociology, Current Sports News, Event Management.</p> <p><u>Phase III: Presentation slides may cover the following:</u></p>

	Phase III shall be held on the consecutive day. The next(third) day shall be kept as reserve in case, the no. of candidates are more for phase III.	1. Educational background, skill-sets and experience 2. How is experience relevant to the post.
O-08 SAS Officer	<p>Phase I: Written Test: Computer based MCQs Type (Time: 01 Hour, Maximum Marks:50)- Candidates qualified in this test will be called for Phase-II.</p> <p>Phase II: Written Test: Computer based MCQs Type (Time 02 Hour, Maximum Marks: 100)-- Candidates qualified in this test will be called for Phase-III.</p> <p>Phase III: Personal Interview- <u>Phase I and II are for the purpose of screening. Final Merit will be prepared on the basis of performance in the Phase III only.</u></p> <p>Phase I and Phase II shall be held on the same day. Phase III shall be held on the consecutive day. The next(third) day shall be kept as reserve in case, the no. of candidates are more for phase III.</p>	<p><u>Syllabus for Phase I (Questions shall be up to the level of graduation):</u> English Language, Numerical Ability and Reasoning, Computer Fundamentals, General Knowledge, current affairs.</p> <p><u>Syllabus for Phase II:</u> Question based on topics including Exercise Physiology, Scientific Principles of Sports Training Test, Measurement, and Evaluation in Physical Education, Applied Statistics in Physical Education and Sports Science, Sports Journalism and Mass Media, Sports Management, Sports Medicine, Health Education and Sports Nutrition, Fitness and Wellness, Yoga, Sports Psychology and Sociology, Current Sports News, Event Management.</p> <p>Phase III: Personal Interview</p>
O-09 Executive Engineer (Electrical)	<p>Phase I: Written Test: Computer based MCQs Type (Time: 01 Hour, Maximum Marks:50)- Candidates qualified in this test will be called for Phase-II.</p> <p>Phase II: Written Test: Computer based MCQs Type (Time 02 Hour, Maximum Marks: 100)-Candidates qualified in this test will be called for Phase-III.</p> <p>Phase III: Personal Interview- <u>Phase I and II are for the purpose of screening. Final Merit will be prepared on the basis of performance in the Phase III only.</u></p> <p>Phase I and Phase II shall be held on the same day. Phase III shall be held on the consecutive day. The next(third) day shall be kept as reserve in case, the no. of candidates are more for phase III.</p>	<p><u>Syllabus for Phase I (Questions shall be up to the level of graduation):</u> English Language, Numerical Ability and Reasoning, Computer Fundamentals, General Knowledge, current affairs.</p> <p><u>Syllabus for Phase II:</u> Work Power and Energy, , Occupational Safety and Health, IT Literacy, Electric Circuits and Laws, Measurement and measuring instruments; Signals and Systems, Electrical Machines: D.C. Machine, 1 phase and 3 phase transformers, single and 3 phase induction motors: theory and applications; Power Systems, Power Electronics, Synchronous Machines, Generation, Transmission and Distribution, Basic Electronics, etc.</p> <p>Estimation and costing: Estimation of lighting scheme, electric installation of machines and relevant IE rules. Earthing practices and IE Rules. Utilization of Electrical Energy: Illumination, Electric heating, Electric welding, Electroplating, Electric drives and motors.</p> <p>Phase III: Personal Interview</p>
AH-10 Pharmacist	<p>Phase I: Written Test: Computer based MCQs Type- (Time 90 Minutes, Maximum Marks: 75, All questions shall carry equal marks and 0.25 marks shall be deducted for each wrong answer)- <u>(Qualifying in nature and Candidates qualified in this test will be</u></p>	<p><u>Syllabus for Phase I (Questions shall be up to the level of 10+2):</u></p> <p>1. General English: Reading Comprehension, Word usage and Vocabulary Based Questions, Antonyms, Synonyms, Spelling Check, Active/Passive Voice, Spotting Errors, Sentence Improvement, One Word Substitutes, Selecting Words, Sentence Corrections, Idioms and Phrases, Common</p>

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<p>called for Phase-II).</p> <p>Phase II: Written Test: Computer based MCQs Type (Time: 02 Hours, Maximum Marks: 100, All questions shall carry equal marks and 0.25 marks shall be deducted for each wrong answer)- 70% weightage in final merit. (Candidates qualified in this test will be called for Phase-III).</p> <p>Phase III: Skill Test- - 30% weightage in final merit.</p> <p>Final Merit will be prepared on the basis of performance in the Phase II and Phase III.</p> <p>The written examination for Phase-I, Phase-II and Phase-III shall be conducted on two consecutive days day with suitable break/interval. The next (third) day shall be kept as reserve in case, the no. of candidates are more for phase III. The venue & date of examination and skill test will be communicated in due course of time. Applicants are advised to plan the travel and accommodation accordingly on their own.</p> <p>Final Merit shall be prepared as follows: Final Merit = 70% of marks obtained in Phase-II + 30% of marks obtained in Phase-III</p> <p>In case of tie/bunching/bracketing of candidates in the final results, the following criteria shall be adopted in the following sequential order for deciding Merit list:</p> <ol style="list-style-type: none"> The candidate with higher marks in Phase-II shall be placed higher on the merit list or If (a) above is same, the candidate with lower negative marks in Phase-II, shall be placed higher on the merit list, or If (a) & (b) above is same, the candidate with lower negative marks in Phase-I, shall be placed higher on the merit list, or 	<p>Error Detection, Ordering of Words, Verbal Analogies, Sentence Formation, Completing Statements, Change of Speech.</p> <ol style="list-style-type: none"> Quantitative Aptitude: Number system, BODMAS, Decimals, Fractions, Average, LCM, HCF, Ratio and Proportion, Percentages, Mensuration, Time and Work; Time and Distance, Simple and Compound Interest, Profit and Loss, Algebra, Geometry and Trigonometry, Elementary Statistics, Square Root, Age Calculations, Calendar & Clock etc. General Intelligence and Reasoning: Includes questions relating to both verbal and non-verbal types, analogies, similarities, differences, space visualization, problem solving, analysis, judgment, decision making, visual memory, Alphabetical and Number Series, Coding and Decoding, Mathematical operations, Relationships, Syllogism, Jumbling, Venn Diagram, Data Interpretation and Sufficiency, Conclusions and decision making, Similarities and differences, Analytical reasoning, Classification, Directions, Statement – Arguments and Assumptions etc. General Awareness: General Knowledge about the History, Polity, Geography, Economy and the Constitution of India, National Symbols, Census 2011, Government Schemes and Policies related to health sector, Current Affairs, Computer Fundamentals. <p>Syllabus for Phase II:</p> <ol style="list-style-type: none"> Pharmaceutical Chemistry: Acids, Bases, and Buffers, Antimicrobials, and astringents, Pharmaceuticals organic compounds, Anaesthetics, Drugs, etc. Pharmaceutics Section: Metrology, Prescriptions, Sterilization, Processing of Tablets, Processing of Capsules Pharmacognosy Section: Adulteration and Drug Evaluation, Pharmaceutical Aids Miscellaneous Drugs Other Important Sections: <ol style="list-style-type: none"> Human Anatomy and Physiology. Health Education and Community Pharmacy Toxicology and Pharmacology Pharmaceutical Jurisprudence Drug Store and Business Management
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	<p>d) If (a), (b) & (c) above is same, the candidate senior in age shall be placed higher on the merit list, or</p> <p>e) In case option at (a), (b), (c) & (d) are exhausted, it will be decided through draw.</p>	<p>f. Hospital and Clinical Pharmacy.</p> <p>g. Patient Compliance</p> <p>h. Pharmacist Oath</p> <p><u>Syllabus for Phase III (Skill Test):</u></p> <p>Domain practical knowledge in the relevant area specific to the post related to the Fields/specializations applied for.</p>
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Annexure I

Mathematics:

Sets and Functions, Algebra: Complex Numbers and Quadratic Equations, Sequence and Series, Trigonometric Functions; Statistics and Probability, Mathematical reasoning, Linear Programming, Differential Equations; Vectors and Three-Dimensional Geometry.

Physics:

Units and Measurements, Work, Energy and Power, Motion in a Straight Line, Motion in a Plane, Mechanical Properties of Solids and fluids, Thermodynamics, Current Electricity, Magnetic Effects of Current and Magnetism, Electromagnetic Waves

Chemistry:

Chemical Bonding and Molecular Structure, Periodicity in Properties, Solid State, Solutions, Biomolecules, Electrochemistry, Chemical Kinetics, Coordination Compounds, Structure and Properties of Organic Molecules, Organic Reaction Mechanism.

Biology:

Cell: Structure and Function, Biology and Human Welfare, Biotechnology and its Applications, Ecology and Environment

Computer:

Computer Systems and Organisation, Data Management, Cyber safety, Computer Networks, Intellectual property rights, IT Act, Technology and society.

Kallikrishnan Anupam De Bimant Kalyan Chirul