Indian Institute of Technology Bhubaneswar

Samantapuri, Bhubaneswar – 751 013

Website: **www.iitbbs.ac.in**

Direct Recruitment to the Post of Junior Technician

Scheme of Examination

	Subject	Maximum Marks	Time
Paper-I (objective type – OMR Answer Sheet will be provided)	All questions are of objective type and carry one mark each without any negative marking for the wrong answer. This part is compulsory for all.	40	40 Minutes
Part-1	General Awareness (focusing on current trends and core concepts of Economics, General Science, Geography, History, and Indian Polity)	20	**40**
	English Language – Comprehension, Grammar, Synonyms and Antonyms, etc.	20	
Part-II (objective type – OMR Answer sheet will be provided)	Domain Knowledge (Based on candidates' area of specialization/discipline, objective type questions will be provided. Part-II questions are divided into four areas; Civil, Mechanical, Electrical, Electronics and Communication, Computer Science and Engineering, and Basic Science. Again Basic Science questions are divided into five areas; Physics, Chemistry, Mathematics, Geo-Physics and Geology, and Bio-Science. Each section has 80 objective type questions. Candidates' are required to select any section of their choice only, preferably	80	80

	matching with their area of specialization/discipline or expertise. Subsequent interview/trade tests will be conducted only in their area of specialization/discipline). Questions will be elementary Diploma level/graduate level (for basic science)		
		120	
	Total Marks		
	Total Time		**120 minutes**
	Written examination is qualifying only		
	Qualified candidates will be taken through the process of interview/trade tests		

Note: (1)   Only those candidates who score minimum cut off marks in the examination (Paper-I and Paper-II), as may be fixed by the IIT Bhubaneswar, will be called for interview.

Note: (2) Written examination shall be qualifying only and no mark shall be taken into account for final selection or ranking of individual candidate.

Note: (3) IIT, Bhubaneswar may fix separate cut off for reserved and unreserved vacancies.

BROAD SYLLABUS FOR DOMAIN KNOWLEDGE (PART-II)

Discipline	Brief Syllabus	No. of Questions
Civil Engineering	Building Materials, Estimating, Costing and Valuation, Surveying, Soil Mechanics, Hydraulics, Irrigation Engineering, Transportation Engineering, Environment Engineering, Structural Engineering covering theory of structures and concrete technology, RCC Design, Steel Design	80
Mechanical Engineering	Manufacturing Technology, Production Technology, Engineering Drawing, CAD/CAM, Materials Engineering, IC Engines, Air conditioning and refrigeration, Machine Design, Machines and Mechanisms, Engineering Mechanics and Strength of Materials, Thermal Engineering, Fluid Mechanics and Machinery,	80
Electrical Engineering	Basic concepts, Circuit Law, Magnetic Circuit, AC fundamentals, Measurement and measuring instruments, Electrical Machines, Fractional Kilowatt Motors and Single Phase Induction Motors, Synchronous Machines, Generation, Transmission and Distribution, Utilization of Electrical Energy, Estimation and Costing, Basic Electronics	80
Electronics and Communication	Networks, Electronic Devices, Analog Circuits, Digital circuits, Signals and Systems, Control Systems, Communications, Electromagnetic	80
Computer Science and Engineering	Digital Logic, Computer Organization and Architecture, Programming and Data Structures, Algorithms, Theory of Computation, Compiler Design, Operating System, Databases, Information Systems and Software Engineering, Computer Networks, Web technologies	80
Basic Sciences	Separate questions for Physics, Chemistry, Mathematics, Geo-Physics & Geology, and Bio-science (60 questions in each category) at the graduate level. Tentative areas of coverage are:	80

	Chemistry : Adsorption – Chromatography – Chemical kinetics – Electrochemistry – Spectroscopy – Fuels and Combustion Geo-Physics and Geology – Earth History, Water, Dirt, and Earth's Environment, Geo-chemical cycles, Earth Systems, Mineralogy, Petrology, Oceanography, General Field Geology, Geo-hydrology, Geo-Chemistry Physics - Sound – Lattices – Ultrasonic flaw detector – X-ray radiography – Interference Fringes – Planck's quantum theory – Laser and Fiber Optics Material Science - Fracture – Magnetic and Dielectric materials – Conductor and Semi conductor materials – Ceramic and Super conductor materials Mathematics – Algebra, Differential Calculus, Vector Calculus, Integral Calculus and Trigonometry, Vector Analysis, Differential Equations, Mechanics Bio-Science – Botany, Bio-Chemistry, Bio-Technology, Cytology, Ecology, Environmental Sciences, Genetics, Molecular Biology	