

Indian Institute of Technology Bhubaneswar

Samantapuri, Bhubaneswar – 751 013

Website: www.iitbbs.ac.in

Direct Recruitment to the Post of Junior Lab. Assistant

Scheme of Examination (Basic Sciences)

	Subject	Maximum Marks	Time
Part-1 (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	
	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 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 matching with their area of specialization/discipline or expertise. Subsequent interview/trade tests will be conducted only in their area of specialization/discipline).	80	80

		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 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.

Note: (4) Candidates called for the interview may have to go through a trade test.

BROAD SYLLABUS FOR DOMAIN KNOWLEDGE (PART-II)

Basic Sciences

Discipline	Brief Syllabus	No. of Questions
Basic Science	<p>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:</p> <p>Chemistry : Adsorption – Chromatography – Chemical kinetics – Electrochemistry – Spectroscopy – Fuels and Combustion</p> <p>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</p> <p>Physics - Sound – Lattices – Ultrasonic flaw detector – X-ray radiography – Interference Fringes – Planck's quantum theory – Laser and Fiber Optics</p> <p>Material Science - Fracture – Magnetic and Dielectric materials – Conductor and Semi conductor materials – Ceramic and Super conductor materials</p> <p>Mathematics – Algebra, Differential Calculus, Vector Calculus, Integral Calculus and Trigonometry, Vector Analysis, Differential Equations, Mechanics</p> <p>Bio-Science – Botany, Bio-Chemistry, Bio-Technology, Cytology, Ecology, Environmental Sciences, Genetics, Molecular Biology</p>	80