



## Selection Process for the post of Junior Technical Superintendent (Postcode 10)

(Staff Recruitment Advt. No: IITDH/Admin/Staff Recruitment/25/2023-24 dated 1<sup>st</sup> February 2023)

All the shortlisted candidates are required to appear in person for the Written Test (s). The venue for Written Test (s) is IIT Dharwad, WALMI Campus, Belur Industrial Area, Near High Court Bench, Pune – Bengaluru Road, Dharwad, Karnataka.

Candidates securing minimum qualifying marks as laid down by the selection committee in Written test I shall be shortlisted for Written test II.

The final selection will be based on aggregate marks obtained from both the written tests (I & II) with weightage of 40% in Written Test I and 60% in Written Test II.

### Examination Pattern:

#### Written Test -I (MCQ Type) (40% Weightage)

Section	Topics/Subjects
1	General Ability Test
2	Technical Questions

Note: 0.25 Negative Marks for every wrong answer MCQ test.

#### Written Test-II (60% Weightage)

Section	Topics/ Subjects
3	Technical
4	Technical Trade/Skill Test (Pen and Paper)

Note: 0.25 Negative Marks for every wrong answer in MCQ questions, If any.

### Syllabus:

Section	Broad syllabus
1	General Awareness, Reasoning, Quantitative Aptitude, Communication Skills
2, 3 & 4	<ul style="list-style-type: none"><li>• <b>Biochemistry:</b> proteins, protein structure and function, carbohydrates, nucleic acids, fats, enzymes, Michaelis Menten Kinetics</li><li>• <b>Genetics:</b> Mendal's theory, central dogma of molecular biology, DNA, chromosomes, genome, DNA replication and repair, transcription and translation</li><li>• <b>Immunology:</b> Innate and adaptive immune systems and their components</li><li>• <b>Cell Biology:</b> Cell structure and function, cell membrane, respiration, photosynthesis, Cell replication, Monod kinetics, cell signaling</li><li>• <b>Microbiology:</b> The Study of Microbial Structure: Microscopy and Specimen Preparation, Microbial identification, Microbial taxonomy, Procaryotic Cell Structure and Function, Microbial Nutrition, Microbial Growth kinetics, Control of Microorganisms by Physical and Chemical Agents, Microbial Metabolism, Fermentation.</li><li>• <b>Physiology:</b> Digestive system, reproductive system, nervous system and respiratory system</li><li>• <b>Biological instrumentation:</b> Chromatographic techniques, Microscopic techniques, spectroscopy and crystallography</li></ul>



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| <ul style="list-style-type: none"><li>• <b>Botany and zoology:</b> Classification of life, vascular and nonvascular plants, plant signaling and behavior, plant nutrition, reproduction in plants, vertebrates and invertebrates, chemical signals in animals, animal transportation systems, sensation and movement in animals</li><li>• <b>Environmental Biology:</b> Ecology, population and biodiversity, energy flow and chemical cycles in ecosystems, conservation and global ecology.</li></ul> |
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