

**Syllabus and Scheme of Written Examination for the Post of Junior Laboratory
Assistant (Technical)- School of Physical Sciences**

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There will be two-stage examination.

Stage I: Written Examination (Objective type) (100 MCQ questions)

Stage II: Skill/Trade Test

Syllabus of Stage-I:

- **Classical Mechanics:** Newtonian mechanics conservation laws, Mechanics of small oscillations, Vectors and vector calculus
- **Electromagnetism:** Electromagnetic induction and alternating current, Magnetic effect of current, Electromagnetic waves
- **Optics:** Wave optics, Ray optics and optical instruments Solid State Physics: Crystal structure, Electrons in Solids, Semiconductors, Magnetism, Superconductivity
- **Nuclear Physics:** Properties of Nuclei, Nuclear decay, Nuclear models, Nuclear Reactions, Detectors
- **Electrical Measurements and Instrumentation:** Fundamentals of Measurement, Analog Indicating Instruments, Oscilloscope, Bridge Circuits, AC bridges, Digital Instruments, Virtual Instrumentation

Syllabus of Stage-II:

Handling common instruments in physics/electronics lab, computer operation skills.

Important Instructions for candidates:

General information about the exam:

- The MCQs have negative marking for wrong answers. The unanswered questions will not be considered for evaluation. (*i.e.*, no marks will be awarded for any question not attempted).
- Only one best-suited answer has to be given for any MCQ. More than one answer will be treated as wrong answer.
- Use of only blue or black ballpoint pen is permitted to answer the questions and fill the form in the exam hall. Use of ink pen/gel pen/pencil/whitener is not permitted.
- Use of calculator, cell phones, log book, periodic table, and any type of electronic device etc., are strictly prohibited.
- The medium of instruction/answers will be English only.
- Involvement in any malpractices will lead to disqualification
- Any additional instructions given during the selection process must be adhered/complied.

Final Selection:

- Examinations for Stage-I and Stage-II will be conducted for all the candidates or as decided by the selection committee.
- Final selection will be made on the scores obtained in the Stage-I, as the Stage –II is of qualifying nature. But if a candidate fails to qualify in Stage-II, her/his candidature will not be considered further.
- Please note that for consideration in the merit list, a candidate has to secure minimum marks fixed by the selection committee in both exams at Stage-I and Stage-II – failing which institute will not make an offer of appointment even if vacancies go unfilled