

INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD

No: 411002/6/2024-NFR

Date – 21.10.2025

NOTICE

Ref: - Advertisement No. 411002/6/2024-NFR dated 09.12.2024 for recruitment to the post(s) of Junior Engineer (Civil/Electrical) (PL-6).

Candidates, shortlisted for recruitment tests for the post(s) of Junior Engineer (Civil/Electrical) (PL-6) are hereby informed about the schedule of recruitment test(s) as under:-

Name of the Test	Test Date	Reporting Time	Test Time	Venue
Written Test: 80 marks	15.11.2025 (Saturday)	09.00 AM	10.00 AM – 12.00 Noon	Conference Hall, Admin Block
Computer Proficiency Test): 20 marks	15.11.2025 (Saturday)	12.30 PM	01.00 PM – 02.00 PM	4 th Floor, Computer Lab NLHC, IIT (ISM) Dhanbad

The recruitment test of Junior Engineer (Civil) and Junior Engineer (Electrical) in Pay Level-6 shall be conducted in two Steps i.e. Written Test and Computer Proficiency Test (CPT).

Candidates will be shortlisted for Document Verification on the basis of performance in the Written Test and CPT.

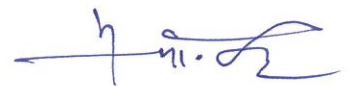
Merit list will be prepared on the basis of combined marks obtained in Written Test and CPT.

Final selection of the candidates against the vacancies will be made on the basis of the Merit List (in order of merit) subject to completion of the Document Verification successfully.

The syllabus for Written Test and Computer Proficiency Test to the post of Junior Engineer (Civil) and Junior Engineer (Electrical) is mentioned at **Annexure A**.

Minimum cut off marks:-

No. of Vacancies	To shortlist for Document Verification (based on the performance in Written Test and CPT)
OBC (NCL)-02	Candidates scoring minimum qualifying marks as under: OBC: Minimum 35% marks in each Written Test and Computer Proficiency Test



Tie-breaking Criteria for Document verification for the post of Junior Engineer (Civil) and Junior Engineer (Electrical)

In case two or more candidates secure equal marks against same vacancy under same category in final Merit List following methodology will be adopted for final selection:

- a) Candidate securing more marks in Written Test is to be ranked higher.
- b) In case two or more candidates secure equal marks in both Written Test & Computer Proficiency Test, candidate senior in Age is to be ranked higher.

Document Verification: - The candidates shortlisted for document verification, on the basis of performance in Written Test & CPT, will have to produce the following documents in original (as mentioned in the advertisement) in support of their eligibility:

- (i) Matriculation certificate in support of Date of Birth
- (ii) Mark sheet of educational qualifications
- (iii) Certificate of educational qualifications
- (iv) Experience certificate
- (v) No Objection Certificate from the present employer (if they are employed in Central Govt./ State Govt./ Union Territory Administration/ Central or State Autonomous Bodies/ Central or State PSUs) etc.

In addition, the following documents are also required to produce for the verification:

For OBC Category: Valid OBC-NCL certificate issued before the closing date of advertisement (i.e. 22.01.2025) by the Competent Authority in the format prescribed for appointment under Govt. of India.

In case, failing to produce the above documents, their candidature will be cancelled, and they will not be selected against the vacancy of the posts, even on passing in Written Test and CPT.

Admit cards for the test(s) will be available for download on or after **07.11.2025**. The candidates may visit https://nfr.iitism.ac.in/index.php/recruitment/User_login and download their admit card by login into portal using e-mail Id, Date of Birth and Mobile number (already registered).


Registrar

Syllabus for Junior Engineer (Electrical)

(A) Written Test (80 Marks) (02 hours)

This will comprise of 40 MCQs based on the syllabus of three years Diploma in Electrical Engineering.

And

Question of 40 Marks will be related to practical skill on the following topics:-

1. ELECTRICAL MATERIAL IDENTIFICATION & TESTING

- ☐ Identification of electrical materials, fittings, and accessories: cables, conduits, switches, sockets, MCBs, MCCBs, contactors, relays, etc.
- ☐ Identification of wires by size and type (PVC, XLPE, armoured, flexible).
- ☐ Testing of cables using megger and multimeter (continuity, insulation resistance).
- ☐ Checking of earthing materials and measuring earth resistance (demonstration).
- ☐ Familiarity with IS/IEC standards related to electrical materials.

2. WIRING PRACTICE & INSTALLATION WORK

- ☐ Demonstration of wiring system as per standard practice:
 - o PVC conduit wiring
 - o Casing-capping wiring
 - o Light and fan circuit wiring with control from one or more points
- ☐ Installation and testing of switchboards, distribution boards, and protective devices.
- ☐ Proper termination, crimping, and dressing of wires.
- ☐ Testing of completed circuits for continuity and insulation.
- ☐ Identification of faults and rectification.

3. ELECTRICAL DRAWING READING & INTERPRETATION

- ☐ Reading and interpreting single-line diagrams (SLD), panel wiring diagrams, and layout drawings.
- ☐ Interpretation of lighting, power, earthing, and cable routing plans.
- ☐ Understanding symbols and notations used in electrical drawings.
- ☐ Preparation of a simple circuit sketch or layout.

4. ESTIMATION, LOAD CALCULATION & MEASUREMENT

- ☐ Load calculation for lighting and power circuits.
- ☐ Determination of size of wire, cable, and protective devices.
- ☐ Preparation of material estimate and BOQ for small installations.
- ☐ Measurement of executed work (cable length, point wiring, fixtures).
- ☐ Familiarity with CPWD/State PWD Electrical Schedule of Rates.

5. INSTALLATION, TESTING & COMMISSIONING OF EQUIPMENTS

- ☐ Installation and testing of:
 - o Ceiling fan, exhaust fan, and light fixtures.
 - o Distribution boards, MCB, RCCB, isolator, and contactor.
 - o Earthing system (pipe/plate type).

- ☐ Testing of insulation resistance, polarity, and earth continuity.
- ☐ Checking of phase sequence and voltage levels.
- ☐ Familiarity with commissioning procedure of LT panel and sub-distribution boards.

6. MAINTENANCE & TROUBLESHOOTING

- ☐ Routine maintenance of electrical installations in buildings.
- ☐ Troubleshooting of lighting, socket, and motor circuits.
- ☐ Fault identification using test instruments (multimeter, tong tester, megger).
- ☐ Preventive maintenance practices for DBs, panels, and earthing pits.

7. SAFETY & STATUTORY PRACTICES

- ☐ Electrical safety rules (as per IE Rules & IS 732).
- ☐ Safe isolation and tagging procedure.
- ☐ Use of PPE and lockout-tagout methods.
- ☐ First aid in case of electric shock.
- ☐ Fire safety precautions in electrical installations.
- ☐ Awareness of energy conservation and green building electrical systems.

8. DOCUMENTATION & OFFICE PROCEDURES

- ☐ Preparation and maintenance of site registers and test reports.
- ☐ Recording of daily progress and material consumption.
- ☐ Understanding of tender documents, work order, and billing process.
- ☐ Familiarity with e-tendering, digital measurement book (M-Book), and ERP systems.

(B) Computer Proficiency Test) (20 Marks) (01 Hour)

Application	Topics / Skills to Test
Microsoft Word	— Creating, formatting documents — Styles, headers/footers — Page layout, margins, columns — Tables, images, captions — Mail merge, references, table of contents
Microsoft Excel	— Basic formulas (SUM, AVERAGE, IF) — Cell references (relative, absolute) — Sorting, filtering — Charts (bar, line, pie) — PivotTables — Conditional formatting — Data validation
Microsoft PowerPoint	— Creating slides, slide layouts — Transitions, animations — Slide master, templates — Inserting images, charts, SmartArt — Slide show settings, presenter view — Embedding media (audio, video)

Syllabus for Junior Engineer (Civil)

(A) Written Test (80 Marks) (02 hours)

This will comprise of 40 MCQs based on the syllabus of three years Diploma in Civil Engineering.

And

Question of 40 Marks will be related to technical skills and works related to the educational Institute on the following topics:

1. **Structural Analysis:** Load calculations, bending moment, shear force, etc.,

2. **Estimation & Costing:** Rate analysis, CPWD norms, DSR familiarity etc.,
3. **Construction Management & safety:** Project scheduling, safety protocols, quality control, etc.,
4. **Environmental & Water Resources Engineering:** Storm water drainage design, Water treatment plant components, Solid waste management techniques, etc.,
5. **Surveying:** Total station and digital theodolite usage, Contour mapping and topographic surveys, etc.,

(B) Computer Proficiency Test) (20 Marks) (01 Hour)

During this test, skill test will be taken in respect of **AutoCAD & Excel:** Basic drafting, spreadsheet calculations.
