



**NITTTR
BHOPAL**



ET-3/2025-2026

Testing of Building and Road Construction Materials Including Non-Destructive Test

21-07-2025 to 25-07-2025

NITTTR Bhopal

<https://erp.nitttrbpl.ac.in/poc2025/?id=regET-3>

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Rationale

Testing of building and road construction materials can be divided into two categories: field testing, which occurs at the project site, and laboratory testing, which involves taking samples from the project site back to an off-site location for further analysis. The outcome of each is to ensure construction materials are safe and reliable, easily maintained and sustainable, do not damage the building or project site, nor endanger anyone or anything within the perimeter of the project. In both methods, repeated testing with inspections is recommended throughout the construction process. These can be done at regular intervals, at any time from beginning to project completion and will help avoid potential risks later on. Lab testing is done when material samples are taken back to an off-site location or lab to review and analyze. This involves reviewing, testing, and providing reports on finished products, such as doors, windows, curtainwalls, and roofing products.

Programme Outcomes

- To take sample of construction material in the field.
- To assess the physical and mechanical properties of materials like aggregates, concrete, bitumen, and soil.
- To check quality of building materials as per standards.
- To conduct various tests on building materials in laboratory.
- To perform non destructive tests on concrete members.
- To compare results with standard strength as per IS code.
- To prepare a test report in standard format.

Programme Content

Soil and Aggregate Sampling and field Testing, Concrete Sampling and Testing, Laboratory testing of soil, Asphalt Testing, Testing of cement, sand and aggregates, Testing of fresh and hardened concrete, Non destructive testing of concrete, Core cutter method of concrete testing, Testing of steel reinforcement bars.

Target Group

Faculty of Civil Engineering and allied disciplines

Coordinator & Co-Faculty

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