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Subject Code: BOE102

Roll No:

BTECH

(SEM. VIII) THEORY EXAMINATION 2025-26

BUILDING SERVICES INSTALLATION, PRACTICES

TIME: 3 HRS

M.MARKS: 70

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief.

2x7 = 14

- Define MEPF. Why is it considered the "lifeline" of a building?
- List three common reasons for coordination failure on a construction site.
- What is the purpose of a "Gully Trap" in a drainage system?
- What is an MCB (Miniature Circuit Breaker), and how does it protect a circuit?
- Differentiate between "Active" and "Passive" fire protection with one example each.
- Define "Commissioning" in the context of building services.
- Mention two common failures observed in buildings after occupancy.

SECTION B

2. Attempt any three of the following:

7 x 3 = 21

- What is a "service shaft," and why is its location critical in architectural planning?
- State the basic purpose of a Lightning Arrester.
- Differentiate between CPVC and UPVC pipes based on their application.
- List the different types of fire extinguishers based on the class of fire they tackle.
- What is the "Defect Liability Period" (DLP), and who is responsible during this time?

SECTION C

3. Attempt any one part of the following:

7 x 1 = 7

- Explain the role of a Civil Engineer in coordinating various building services. How does a lack of coordination affect the project timeline and cost?
- What is BIM? Discuss how BIM helps in identifying "clashes" between structural elements and service ducts.

4. Attempt any one part of the following:

7 x 1 = 7

- Describe the typical water supply sequence for a residential building, starting from the Underground Tank (UGT) to the Overhead Tank (OHT).
- Explain the "Internal Drainage System" of a building. Sketch a neat diagram showing the connection of various sanitary fixtures to the main stack.

5. Attempt any one part of the following:

7 x 1 = 7

- Discuss the safety norms to be followed during the electrical wiring of a construction site. What are the hazards of temporary wiring?
- Explain the different types of earthing systems used in buildings. Which type is most common for residential projects?

6. Attempt any one part of the following:

7 x 1 = 7

- Explain the essential components of a "Fire Detection and Alarm System." How do smoke detectors and heat detectors differ in function?
- Describe the requirements for "Emergency Exits" and "Fire Towers" in a multi-story building as per standard safety norms.

7. Attempt any one part of the following:

7 x 1 = 7

- Prepare a basic inspection checklist for a Civil Engineer before handing over the plumbing and electrical services of a flat to an owner.
- Discuss the importance of "Operation and Maintenance" (O&M) manuals. How does regular maintenance contribute to the sustainability of a building?