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21CV72



## Seventh Semester B.E./B.Tech. Degree Examination, June/July 2025 Construction Technology for Substructure and Super Structures

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. Define underground construction and types of underground construction. (10 Marks)
- b. Define micro-tunneling and equipments used in microtunnling. (10 Marks)

OR

- 2 a. Explain tunnel driving in Hard strata. (10 Marks)
- b. Define soil compaction and technologies. (10 Marks)

### Module-2

- 3 a. Define underwater construction and problems encountered in excavation. (10 Marks)
- b. Define grouting and various methods of grouting. (10 Marks)

OR

- 4 a. Explain different methods of dewatering in deep excavations. (10 Marks)
- b. Explain vaccum dewatering and applications of vaccum dewatering. (10 Marks)

### Module-3

- 5 a. Explain under water erection methods of concreting. (10 Marks)
- b. Define shuttering and types of shuttering. (10 Marks)

OR

- 6 a. Explain underwater concreting using tremie method. (10 Marks)
- b. Define self compacting concrete and characteristics of SCC. (10 Marks)

### Module-4

- 7 a. Define single and group pile and types of single pile and group pile. (10 Marks)
- b. Explain piles in land and marine structures. (10 Marks)

OR

- 8 a. Explain failure of piles and causes. (10 Marks)
- b. Define diaphragm wall, types of diaphragm walls and construction process. (10 Marks)

### Module-5

- 9 a. Define coffer dams and classify them on the basis of purpose and location. (10 Marks)
- b. Explain concrete wall movable cofferdam, components and types of movable coffer dams. (10 Marks)

OR

- 10 a. Explain coffer dam construction using ICOS method. (10 Marks)
- b. Explain cofferdam with inter locking piles and applications. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.