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Pages: 2

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S8 (R,S) / S6 (PT) (R,S) Exam April 2025 (2019 Scheme)



Course Code: CET454

Course Name: CONSTRUCTION METHODS AND EQUIPMENT

Max. Marks: 100

Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks.

Marks

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| 1 | What are the uses of expansion joints? | (3) |
| 2 | List the advantages and disadvantages of slip-form techniques. | (3) |
| 3 | Explain cofferdam and list its type. | (3) |
| 4 | Explain shoring and its advantages. | (3) |
| 5 | Describe the purpose of the excavator and loader. | (3) |
| 6 | Describe the role of compaction equipment. | (3) |
| 7 | List the methods of concrete pouring. | (3) |
| 8 | Mention the role of transit mixers. | (3) |
| 9 | Write short note about forklifts. | (3) |
| 10 | What are the difference between a single and double acting steam hammer? | (3) |

PART B

Answer any one full question from each module, each carries 14 marks.

Module I

- 11 a) Explain any two launching techniques used in the bridge construction with advantages. (7)
- b) Explain any two methods of tall structure erection. (7)

OR

- 12 a) Explain the vacuum dewatering of concrete flooring with a neat diagram. (7)
- b) Describe the procedure employed to construct cable stayed bridges. (7)

Module II

- 13 a) Discuss the details of diaphragm wall and its application (7)
b) Explain the well-point dewatering method with the help of a neat figure. (7)

OR

- 14 a) Illustrate piling techniques. Explain any four types with the diagram. (14)

Module III

- 15 a) Describe the role and advantages of motor grader in earthwork operations. (7)
b) List and explain different types of scrapers used for earthwork operations. (7)

OR

- 16 a) Explain any four equipment used for hauling purpose of earthwork with its advantages. (14)

Module IV

- 17 a) What is the difference between the working of a jaw crusher and a gyratory crusher? (7)
b) Describe the requirement of the feeder and screener in aggregate manufacturing. (7)

OR

- 18 a) Illustrate the machinery and methods in the concrete manufacturing process. (14)

Module V

- 19 a) What are the equipment used for grouting? Explain any two. (7)
b) Explain the role and types of pumps used in construction. (7)

OR

- 20 a) Explain the following types of cranes with a neat sketch (14)
a) Derrick crane
b) Tower crane
c) Overhead crane
d) Mobile crane
