

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
B.Tech Degree S8 (R,S)(FT/PT) Examinations April 2026 (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

- | | | |
|----|---|-----|
| 1 | What is the launching technique of a bridge deck ? | (3) |
| 2 | Necessitate the significance of expansion joints. | (3) |
| 3 | Compare between deep and shallow excavation. | (3) |
| 4 | What is a pneumatic caisson? Where do we use it? | (3) |
| 5 | Mention the uses of a grader. | (3) |
| 6 | What is a sheep foot roller? | (3) |
| 7 | Explain the functional role and application of a feeder in construction industry. | (3) |
| 8 | What is the function of load cells in a concrete batching plant ? | (3) |
| 9 | List out various types of hoisting equipment used in construction. | (3) |
| 10 | Explain any two types of material handling conveyors. | (3) |

PART B

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

Module I

- | | | |
|----|---|-----|
| 11 | a) Explain the procedure involved in the construction of domes. | (6) |
| | b) Explain two erection techniques involved in the construction of tall structures. | (8) |

OR

- | | | |
|----|--|-----|
| 12 | a) Describe the procedures employed to construct cable-stayed bridges. | (7) |
| | b) Explain the working method and advantages of slip-form technique. | (7) |

Module II

- | | | |
|----|--|-----|
| 13 | a) Discuss in detail any two piling techniques. | (6) |
| | b) Describe in detail any four tunnelling methods. | (8) |

OR

- | | | |
|----|--|-----|
| 14 | a) Explain sheet piles and diaphragm walls with neat sketches. | (8) |
| | b) Explain any two methods of dewatering foundation excavations. | (6) |

Module III

- 15 a) Discuss in detail various types of equipment used for compaction in the field and describe their uses. (14)

OR

- 16 a) Explain in detail any four types of excavation equipment. (14)

Module IV

- 17 a) Mention the role of concrete handling equipment in the construction site. List two concrete handling equipment with their uses (6)

- b) List and explain any two types of mixers used for concrete mixing. (8)

OR

- 18 a) Explain the various equipment used for aggregate production with their uses. (14)

Module V

- 19 a) What is a tower crane? Enlist the advantages of using tower cranes in construction. (8)

- b) Differentiate between Mobile Cranes and Over Head Gantry Cranes. (6)

OR

- 20 a) What are forklifts? What are its uses in construction? (8)

- b) Discuss in detail any three types of conveyor belts used in construction (6)
