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)

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