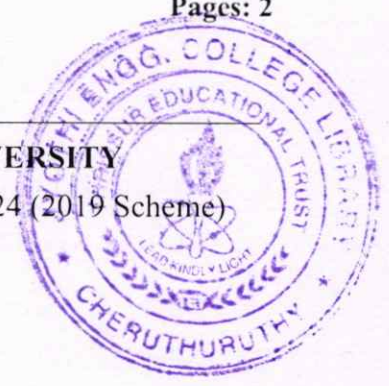


Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S5 (S, FE) / S5 (PT) (S) Examination June 2024 (2019 Scheme)

**Course Code: CET 309****Course Name: CONSTRUCTION TECHNOLOGY AND MANAGEMENT**

Max. Marks: 100

Duration: 3 Hours

PART A*(Answer all questions; each question carries 3 marks)*

Marks

- | | | |
|----|--|---|
| 1 | Discuss the importance of gradation of aggregates | 3 |
| 2 | List out different constituents of Portland cement with their percentage content | 3 |
| 3 | What is segregation and bleeding? | 3 |
| 4 | Explain pointing and its benefits. | 3 |
| 5 | What is scaffolding? List out different types. | 3 |
| 6 | Explain prefabricated construction technology. | 3 |
| 7 | Explain lump sum contract. Discuss its disadvantages. | 3 |
| 8 | Discuss the major duties of a project manager. | 3 |
| 9 | What is construction schedule? Discuss the importance of the same. | 3 |
| 10 | Discuss the importance of work breakdown structure. | 3 |

PART B*(Answer one full question from each module, each question carries 14 marks)***Module -1**

- | | | |
|----|---|---|
| 11 | a) Distinguish between plywood and multi wood. | 6 |
| | b) Explain the tests for determining soundness and specific gravity of given cement sample. | 8 |

OR

- | | | |
|----|--|---|
| 12 | a) What is an admixture and why it is used? Explain any 3 types of admixtures. | 7 |
| | b) What is bulking of fine aggregate? Explain the phenomenon and write down the necessity of determining the percentage bulking. | 7 |

Module -2

- | | | |
|----|--|---|
| 13 | a) Discuss the necessity of curing of concrete. Explain any 2 methods of curing. | 5 |
| | b) What is workability? Explain any 4 factors affecting workability. | 9 |

OR

- | | | |
|----|--|---|
| 14 | a) What is plastering? Discuss the objectives of plastering? List out any 2 qualities of a good plaster. | 7 |
| | b) Explain various types of arches with neat sketch. | 7 |

Module -3

- 15 a) Explain 3D printing construction 4
 b) What are the causes of failures of RCC structures? 10

OR

- 16 a) What is form work? List out the requirements of a good form work. Also explain shuttering of a column with neat sketch. 8
 b) Distinguish between voided slab technology and filler slab technology with neat figures 6

Module -4

- 17 a) List out the 3 phases included in the life cycle of a construction project. List out any 4 activities to be completed in the 1st phase. 7
 b) List out the types of tenders and explain. 7

OR

- 18 a) What is a contract? Explain any 5 types. 12
 b) What is the difference between an open tender and a selective tender? 2

Module -5

- 19 The following table lists the various activities of a network along with their time estimates (days). Draw the network diagram and determine the critical activities of the network by calculating the floats. 14

Activity	Predecessor	Duration (days)
A	-	6
B	A	5
C	A	2
D	B	5
E	C	1
F	C	2
G	D, E	4
H	F, G	5

OR

- 20 Discuss the shortcoming of bar chart and the remedial measures of the same with neat sketches. 14
