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Reg No.:_______________ Name:_______________________

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S7 (S, FE) Examinations May 2026 (2019 Scheme)

Course Code: CET453

Course Name: CONSTRUCTION PLANNING AND MANAGEMENT

Max. Marks: 100 **Duration: 3 Hours**

PART A

Answer all questions, each carries 3 marks. Marks

1 Differentiate resource smoothing and resource levelling. (3)

2 What is crashing in project management? Discuss its implications. (3)

3 What are the phases of life cycle of a building? Briefly explain. (3)

4 Explain Minimum Wages Act and its advantages. (3)

5 Explain the objectives and importance of Human Resources Management in an organization. (3)

6 Define holding cost for an inventory. How does it vary with the ordering quantity? (3)

7 Differentiate between General and Special conditions of contract. (3)

8 Elaborate the method and suitability of cost-benefit analysis of projects (3)

9 Differentiate open and selective tendering. (3)

10 What is profit centre analysis and what are the different types of profit centre analysis? (3)

PART B

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

Module I

11 a) List out members of the construction team and write the responsibilities. (5)

b) Determine the optimum project duration and the total project cost if the indirect cost is Rs. 4,00 per week. (9)

Activity	Predecessor	Normal Duration (weeks)	Normal Cost (Rs)	Crash Duration (weeks)	Crash Cost (Rs)
A	-	4	6,000	3	10,000
B	-	5	4,000	4	9,000
C	A	6	8,000	4	14,000
D	A	3	3,500	2	6,000
E	B, C	5	7,000	3	12,000

OR

12 a) What is time cost trade off? Explain the methodology for determining the optimum time for a project. (7)

b) Explain the different phases of a project specifying the activities to be carried out in each of the phases. (7)

Module II

13 a) Explain the organisational maturity in BIM. (7)

b) Explain any two labour legislations pertaining to the construction industry. (7)

OR

14 a) Describe the BIM workflow in the building lifecycle. (7)

b) Elaborate on the deductions that may be made from wages, as per the Payment of Wages Act 1936. (7)

Module III

15 a) Explain the need for Quality Assurance and Quality Control in construction. (7)

b) Discuss the suitable levels of training for construction workers. (7)

OR

16 a) What is the importance of Inventory Management? Explain the various Inventory Management techniques (10)

b) Briefly explain Over manning and its effects. (4)

Module IV

17 a) Elaborate on the process of e-tendering for construction projects (7)

b) What is an M Book? How is this used in the construction field? (7)

OR

18 a) Compare the similarities and differences between the Net Present Value (NPV) method and the Internal Rate of Return (IRR) method used in project analysis. (7)

b) Explain why Earnest Money Deposit and Security Deposit are made mandatory in almost all construction contracts. Discuss the purpose behind this. (7)

Module V

19 a) What is financial statement analysis? Discuss the three main financial statements. (6)

b) Analyse the important benefits of the following: (8)

1)Fund Flow Analysis

2) Financial Ratio Analysis

OR

20 a) Discuss the major categories of financial institution in India. (7)

b) What is a working capital operating cycle? Elaborate with a neat diagram. (7)

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