Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
B.Tech Degree S7 (R, S) Examination November 2024 (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	Explain the objectives of construction planning and management	(3)
2	Explain the roles and responsibilities of Client in a construction project	(3)
3	Explain the concept of 4th and 5th dimension BIM models	(3)
4	Explain any three welfare measures to be provided by the contractor to contract labour as per Contract labour (regulation and abolition) act, 1970	(3)
5	Differentiate between recruitment and selection	(3)
6	Enlist any three causes of accidents in construction site	(3)
7	Explain Cost Benefit Analysis	(3)
8	Give an example of any one General Condition of Contract and one Special Condition of Contract	(3)
9	Enlist any three financial institutions serving project funding	(3)
10	Explain financial ratio analysis	(3)

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

Module I

11 a) Explain in brief the roles and responsibilities of Contractor, Client, Consultant and Subcontractor in a construction project   (7)

   b) Explain the step by step procedure for determining the optimum time and optimum cost through project crashing   (7)

OR

12 a) Find out the optimum project cost and time. Their normal duration and costs along with crash costs and duration are given below. Project overhead cost is Rs 200 per day.   (14)

Activity	Normal duration	Normal cost	Crash duration	Crash cost
1-2	7	700	4	850
1-3	5	500	3	700
1-4	8	600	5	1200
2-5	9	800	7	1250
3-5	5	700	3	1000
3-6	6	1100	5	1300
4-6	7	1200	5	1450
5-7	2	400	1	500
6-7	3	500	2	850

Module II

13 a) Explain the advantages and challenges an organisation may experience by implementing BIM based construction project management   (7)

b) Explain the how BIM works with the concept of 3D modelling and integration   (7)

OR

14 a) Explain the levels of development of BIM with an example   (7)

b) Explain the necessity of implementing labour legislations in construction industry   (7)

Module III

15 a) Explain the various roles and responsibilities of stores and inventory management department in Construction management   (7)

b) What is material codification? Explain how material codification helps in better stores and inventory management.   (7)

OR

16 a) Function of HR department is to, 'depute the right man for the right job at the right time'. Justify the statement and explain how this is achieved.   (7)

b) Explain the flowing terms;   (7)
   (a) Economic Order Quantity
   (b) ABC Analysis

Module IV

17 a) Compare and contrast between NPV and IRR methods of project analysis   (7)

b) Explain the various documents that are included in the Contract Agreement   (7)

OR

18 a) Compare and contrast between Measurement Book and Muster Roll   (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) Explain the various mechanisms through which Infrastructure projects are financed in India (7)

b) What is the necessity of preparing project budget? Explain how budget acts as a financial control measure. (7)

OR

20 a) Explain the concept of profit centre approach and any three profit centres (7)

b) Differentiate between top down and bottom top approaches in project budgeting (7)

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