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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Seventh Semester B.Tech Degree Regular and Supplementary Examination December 2023 (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 Critical Path of project (3)
- 2 What do you mean by float? Discuss the different types of float (3)
- 3 Explain Minimum Wages Act and its advantages (3)
- 4 Briefly explain any three advantages of using BIM in Construction Management (3)
- 5 Briefly explain what is Recruitment (3)
- 6 Briefly explain Over manning and its effects (3)
- 7 Briefly explain Mobilisation Advance and its objective (3)
- 8 What is a cash book (3)
- 9 Enlist the main sources of project financing (3)
- 10 Briefly explain Master Budget (3)

PART B

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

Module I

- 11 a) A maintenance project consists of a number of jobs. Their normal duration and costs along with crash costs and duration are given below. Find out the optimum project cost and time. Indirect cost Rs. 6000/ per day (14)

Activity	Normal Duration	Normal Cost	Crash Duration	Crash Cost
1-2	9	9000	6	15000
1-3	8	2000	5	9500
1-4	15	5000	10	20000
2-4	5	2000	3	4000
3-4	10	7000	6	13000
4-5	2	3000	1	7000

OR

- 12 a) Explain the roles and responsibilities of a Contractor in construction project (7)
b) What is time cost trade off? Explain the methodology for determining the optimum time for a project (7)

Module II

- 13 a) Explain the Virtual construction workflow with 5D in BIM (7)
b) Explain the organisational maturity in BIM (7)

OR

- 14 a) Explain the concept of 3D coordination and clash detection in BIM (7)
b) Explain about the Workmen's Compensation Act 1923 (7)

Module III

- 15 a) Explain the objectives and benefits of Human Resources Management in an organisation (7)
b) What is the importance of Inventory Management? Explain the various Inventory related costs (7)

OR

- 16 a) Enlist any seven causes of accidents in a construction site and safety measures to be adopted to prevent it. (7)
b) Explain the various functions of material management department (7)

Module IV

- 17 a) Differentiate between General and Special conditions of Contract (7)
b) What is Measurement Book? Enlist the purpose of maintaining a Measurement Book (7)

OR

- 18 a) What is Security Deposit? Explain the purpose of Security Deposit (7)
b) Explain the concept Net Present Value and its use in Project management (7)

Module V

- 19 a) What is Profit centre analysis and what are the different types of Profit centre analysis (7)
b) What are the different types of Budget? (7)

OR

- 20 a) What is Financial statement analysis and discuss the three main financial statements (7)
b) Differentiate between top-down and bottom-top approaches in budgeting. (7)
