Question Paper Code	12471

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2023
Fifth Semester
Civil Engineering
20CEEL504 - CONSTRUCTION PLANNING, SCHEDULING AND CONTROL
(Regulations 2020)

Duration: 3 Hours   Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

Marks,
K-Level, CO

1. Outline the significance of choice of technology.   *2,K2,CO1*
2. Define activity precedence with an example?   *2,K1,CO1*
3. Compare CPM and PERT.   *2,K2,CO2*
4. What is the necessity of time cost tradeoffs?   *2,K1,CO3*
5. Compare financial accounting and cost accounting.   *2,K2,CO4*
6. Define Project Budget.   *2,K1,CO4*
7. Define quality circle.   *2,K1,CO5*
8. Mention the causes of accidents in construction industry.   *2,K1,CO5*
9. Define database and DBM.   *2,K1,CO6*
10. List any four software's used for project Management.   *2,K1,CO6*

PART - B (5 × 13 = 65 Marks)
Answer ALL Questions

11. a) Explain codification approach with examples.   *13,K2,CO1*

OR

    b) Discuss in detail about the estimation of activity durations and   *13,K2,CO1*
       importance of learning curves.

12. a) The duration of activities of a project is as follows. Draw the PERT *13,K3,CO2*
       network diagram. Identify various paths. Identify the critical path.
       Tabulate the computations. Evaluate the project time.

Activity	1-2	1-3	2-4	2-5	4-7	5-7	7-8	3-6	6-8
Duration in days	5	10	1	6	12	3	4	7	6

OR

    b) (i) Describe various methods of presenting project schedules.   *7,K2,CO2*

       (ii) Explain in relation to network, the terms critical activity, Total   *6,K2,CO2*
       float and free float.

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create   **12471**

13. a) (i) Explain forecasting for activity cost control in detail. *7,K2,CO4*

   (ii) What are the different types of accounting systems? Discuss briefly. *6,K2,CO4*

   OR

   b) Illustrate the profit estimation of project under "percentage completion method" and "completed contract method". *13,K2,CO4*

14. a) Explain statistical quality control with sampling by attributes and sampling by variables. *13,K2,CO5*

   OR

   b) Discuss in detail about the process of quality control and safety during construction. *13,K2,CO5*

15. a) (i) Explain how information can be organized using computers. *5,K2,CO6*

   (ii) Discuss about centralized database management system. *8,K2,CO6*

   OR

   b) (i) Explain the problems in information system management in detail. *5,K2,CO6*

   (ii) Elaborate the types of project information and its uses in construction. *8,K2,CO6*

PART - C (1 × 15 = 15 Marks)

16. a) The following table gives data about duration and costs of various activities of a project. The project overhead costs are Rs.3000 per week. Determine the optimum duration and cost associated with it. *15,K3,CO3*

Activity	Duration (Weeks)		Cost (Rs.)	
	Normal	Crash	Normal	Crash
10-20	3	2	12000	16000
10-30	6	3	18000	24000
20-40	2	1	20000	23000
30-40	4	2	16000	21000
40-50	5	4	30000	35000

   OR

   b) Explain the resource smoothening & resource levelling with an example. *15,K3,CO3*