

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022

Seventh Semester

Civil Engineering

CE8012 - CONSTRUCTION PLANNING AND SCHEDULING

(Regulations 2017)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
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| 1. Define work breakdown structure. | 2,K1,CO1 |
| 2. How will you estimate the activity duration? | 2,K1,CO1 |
| 3. Write down the significance of critical path. | 2,K2,CO2 |
| 4. Identify the various resources used for construction projects. | 2,K3,CO2 |
| 5. Define CDBMS. | 2,K1,CO6 |
| 6. List out the components of cash flow status report. | 2,K1,CO3 |
| 7. What are the important items to be inspected during the construction? | 2,K1,CO4 |
| 8. Classify the statistical sampling methods for quality control. | 2,K2,CO4 |
| 9. Outline the advantages and disadvantages of centralized database management system. | 2,K2,CO5 |
| 10. Compare the relational model of data bases and conceptual models of databases. | 2,K2,CO5 |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

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|--|-----------|
| 11. a) (i) Explain in detail about the basic concept involved in the development of construction plan. | 8,K2,CO1 |
| (ii) Draw a typical WBS tree diagram for residence building construction. | 5,K2,CO1 |
| OR | |
| b) (i) How do you specify precedence relationship in activity on node and activity on branch network? | 7,K2,CO1 |
| (ii) Explain briefly the Choice of technology in construction. | 6,K2,CO1 |
| 12. a) (i) The duration of activities of a project is as follows. Draw the PERT network diagram. Identify various paths. Identify the critical path. Tabulate the computations. Evaluate the project time. | 9, K3,CO2 |

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

(ii) Compare Precedence network analysis (PERT) and critical path method (CPM). 4, K3,CO2

OR

b) (i) Discuss about direct cost and indirect cost. 4,K2,CO2

(ii) Solve the critical path and all the floats by constructing activity on branch network? 9,K2,CO2

Activity	A	B	C	D	E	F	G
Predecessor	-	A	A	A	D	C,E	D,F
Duration (Days)	3	6	16	10	8	5	3

13. a) (i) Explain project Cash flow. 7, K2,CO4
(ii) Classify the cost control systems and explain it. 6, K2,CO4

OR

b) (i) Describe about on Schedule control with an S curve. 6, K2,CO4
(ii) Explain Forecasting for Activity Cost Control in detail. 7, K2,CO4

14. a) (i) Define accidents. Explain the causes for accidents at construction sites and the various costs associated with accidents. 7, K3,CO5
(ii) List the safety precautions for the high rise RCC cast-in-situ construction. 6, K2,CO5

OR

b) (i) Describe the statistical quality control with sampling by attributes. 7, K3,CO5
(ii) Define and differentiate between Quality Audit and Quality Check with example. 6, K2,CO5

15. a) (i) Elaborate in detail about the various sets of information collected in regard to construction project information. 6, K2,CO6
(ii) Discuss in detail about the computerized organization and use of information in a project. 7, K3,CO6

OR

b) (i) Explain the any two types of DBMS based on Information Systems followed in construction industry. 7, K3,CO6
(ii) Explain the main functions of Project Management Information System? What are the major components of it? 6, K2,CO6

PART - C (1 × 15 = 15 Marks)

16. a) Develop briefly on the advanced scheduling techniques. 15,K3,CO3

OR

b) Explain in detail about resource oriented scheduling. 15,K2,CO3

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

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