Reg. No.															

Question Paper Code	14058

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2025

Fifth Semester

Civil Engineering

20CEEL504 - CONSTRUCTION PLANNING, SCHEDULING AND CONTROL

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	Which of the following is the first step in developing a construction plan? (a) Estimating activity durations (b) Defining work tasks (c) Defining precedence relationships (d) Estimating resource requirements	1	K1	CO1
2.	The process of identifying the order in which activities must be performed is called _____. (a) Scheduling (b) Coding (c) Defining precedence relationships (d) Resource estimation	1	K1	CO1
3.	The Critical Path Method (CPM) is used to _____. (a) Determine project costs (b) Identify the longest path of dependent activities in a project (c) Allocate resources to workers (d) Estimate material quantities	1	K1	CO2
4.	The graphical representation of project activities and timelines is called _____. (a) Schedule presentation (b) Float chart (c) Project layout (d) Resource allocation chart	1	K1	CO2
5.	Which advanced scheduling technique is used for optimizing schedules under resource limitations? (a) Resource leveling (b) Float analysis (c) Time–cost crashing (d) CPM	1	K1	CO3
6.	The main purpose of Monte Carlo simulation in scheduling is to: (a) Optimize resources (b) Analyze time–cost tradeoffs (c) Handle uncertainty in activity durations (d) Identify project cost overruns	1	K1	CO3
7.	The project budget is primarily prepared during which phase? (a) Execution phase (b) Planning phase (c) Monitoring phase (d) Closing phase	1	K1	CO4
8.	Control of project cash flows is essential to _____. (a) Maintain liquidity and ensure timely payments (b) Increase total project cost (c) Delay vendor payments (d) Eliminate budgeting	1	K1	CO4
9.	The main objective of quality and safety management in construction is to _____. (a) Reduce project duration (b) Ensure that the project meets specified standards and minimizes accidents (c) Increase project cost (d) Eliminate inspections	1	K1	CO5
10.	In a relational database model, data are organized in _____. (a) Hierarchies (b) Tables consisting of rows and columns (c) Tree structures (d) Random files	1	K1	CO6

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

		Marks	K – Level	CO
11.	Define construction planning.	2	K1	CO1
12.	List out the importance of estimating activity durations in a project.	2	K1	CO1
13.	Show a simple network diagram for a 3-task project (A → B → C).	2	K1	CO2
14.	Compare CPM and PERT.	2	K2	CO2
15.	What is meant by crashing?	2	K1	CO3

16. List the softwares used for improving the scheduling process. *2 K1 CO3*
17. Classify the key steps involved in updating a project budget during execution. *2 K2 CO4*
18. Outline the relationship between cost and schedule information. *2 K2 CO4*
19. List out any two safety quotation. *2 K1 CO5*
20. Classify the term accidents. *2 K2 CO5*
21. Label the advantages of information accuracy in project management. *2 K1 CO6*
22. Define the term concept of information flow. *2 K1 CO6*

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23. a) Summarize the importance of coding system of activities with examples. *11 K2 CO1*

OR

b) Discuss in detail about precedence relationship among activities with neat sketches. *11 K2 CO1*

24. a) Draw the network diagram for the following details. Calculate the critical path and critical duration. *11 K3 CO2*

Activity	A	B	C	D	E	F	G
Predecessor	-	A	-	C	B, C	D, E	F
Durations(days)	7	2	9	6	10	13	4

OR

b) Draw the network diagram for the following details. Calculate the critical path and critical duration. *11 K3 CO2*

Activity	A	B	C	D	E	F	G
Predecessors	-	A	B	B	D	C, E	F
To	5	2	8	6	9	2	7
Tm	3	1	6	4	7	1	5
Tp	6	4	9	5	8	4	6

25. a) Explain in detail about cost control problems associated in construction projects. *11 K2 CO3*

OR

b) Summarize the methods adopted to estimate cost overrun in a delayed construction. *11 K2 CO3*

26. a) Compare financial accounting system and cost accounts. *11 K2 CO4*

OR

b) Illustrate the need for schedule control in cost management. *11 K2 CO4*

27. a) Interpret the process involved in measuring safety performance. *11 K2 CO5*

OR

b) Explain the statistical quality control with sampling by attributes. *11 K2 CO5*

28. a) Discuss about centralized database management system. *11 K2 CO6*

OR

b) Summarize on the various types of Project Information. *11 K2 CO6*