Register No : _____

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2026

Second Semester

ME-Construction Engineering and Management

PCNT2422- CONSTRUCTION PLANNING, SCHEDULING AND CONTROL

Regulations - 2024

Duration: 3 Hrs. ***Maximum: 100 Marks***

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

Q.No	Questions	BTL	CO	Marks
1.	Define construction planning.	L1	1	2
2.	List the basic steps in project planning.	L1	1	2
3.	What is meant by work breakdown structure?	L2	2	2
4.	Explain the term “float” in project scheduling.	L1	2	2
5.	Differentiate CPM and PERT techniques.	L1	3	2
6.	What is a precedence diagram?	L2	3	2
7.	Define resource leveling.	L2	4	2
8.	Mention any two factors affecting resource scheduling.	L2	4	2
9.	What is project monitoring?	L2	5	2
10.	State the significance of earned value management.	L1	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No			Questions	BTL	CO	Marks
11.	a	i	Explain the stages in developing a construction plan.	L2	1	8
		ii	Discuss the importance of defining work tasks with suitable example.	L2	1	8
			Or			
	b	i	Explain any one of the methods for estimating activity durations.	L2	1	8
		ii	Describe the coding systems used in construction planning.	L2	1	8
12.	a		A Construction project consists of 12 activities are given below,	L3	2	16

Activity	A	B	C	D	E	F	G	H	I	J	K	L
Predecessors	-	-	-	A	C	B,E	A	C	D,F	D,F	I,H	G,J,K
Duration (Weeks)	6	8	7	7	4	9	8	4	5	4	6	9

a) Draw Project Network. (4)

b) Arrive the critical path. (4)

c) Calculate EST, EFT, LST, LFT and Floats. (8)

Or

	b		A Construction project consists of 7 activities. The time estimates (in weeks) of different activities are given below:	L3	2	16

Activity	1-2	1-3	1-4	2-5	3-5	4-6	5-6
Optimistic Time	1	1	2	1	2	2	3
Most probable Time	1	4	2	1	5	5	6
Pessimistic Time	7	7	8	1	14	8	15

a) Draw Project Network. (4)
b) Arrive the critical path. (4)
c) Calculate the variances & Standard deviation of the project length.(4)
d) Assess the probability of completing the project 3 weeks earlier than the expected time. (4)
Take:

Normal Deviation		-0.9	-1.0	-1.1
Probability		18.4	15.9	13.6

13.	a	i	Apply the precedence relationships to identify critical and non-critical activities.	L3	3	8
		ii	Illustrate how leads and lags affect project scheduling.	L3	3	8
			Or			
	b	i	Apply PDM for analyzing interdependent activities.	L3	3	8
		ii	Compare precedence network with arrow diagram method.	L3	3	8
14.	a	i	Analyze resource constraints in project scheduling.	L4	4	8
		ii	Examine the impact of resource allocation on project delay.	L4	4	8
			Or			
	b	i	Analyze the steps are involved in line of balance scheduling for repetitive works.	L4	4	8
		ii	Evaluate time–cost trade-off techniques with example.	L4	4	8
15.	a	i	Evaluate various cost control methods used in construction.	L5	5	8
		ii	Assess the role of earned value management in project control.	L5	5	8
			Or			
	b	i	Judge the effectiveness of project performance review techniques.	L5	5	8
		ii	Recommend suitable corrective actions for project cost overruns.	L5	5	8

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