Q.6		Attempt any two:				
	i.	What are the common causes of time and cost overrun?	**5**	02	02	02
	ii.	Write about application / uses of software used in CPM.	**5**	02	02	02
	iii.	Why updating of plan is necessary? Explain any two methods of updating.	**5**	02	02	02

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Total No. of Questions: 6 *Total No. of Printed Pages:4*

Enrollment No.....

Faculty of Engineering
End Sem Examination Dec 2024
CE3EC05 Construction Project Management

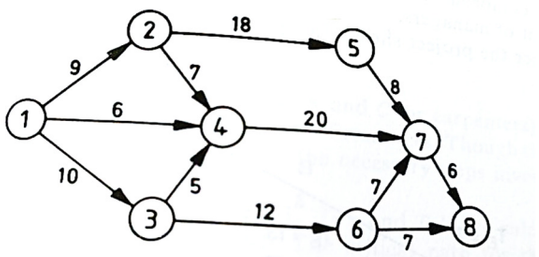
Programme: B.Tech. Branch/Specialisation: CE

Duration: 3 Hrs. **Maximum Marks: 60**

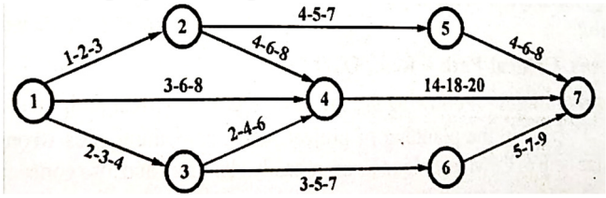
Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

			Marks	BL	PO	CO	PSO
Q.1	i.	Site layout is another name of- (a) Site specification (b) Job layout (c) Job drawing (d) All of these	**1**	01	11	01	
	ii.	Money released by executing a particular activity or work is termed as- (a) Schedule (b) Planning (c) Invoice (d) Controlling	**1**	01	11	01	
	iii.	PERT is- (a) Activity oriented (b) Event oriented (c) Time oriented (d) Resource oriented	**1**	01	11	01	
	iv.	The minimum time in which an activity may be expected to complete under most worst condition is termed as- (a) Pessimistic time (b) Optimistic time (c) Most likely time (d) None of these	**1**	01	11	01	
	v.	Critical path method requires- (a) Single time estimate (b) Double time estimate (c) Triple time estimate (d) None of these	**1**	01	02	01	
	vi.	Total cost of the project comprises- (a) Direct cost only (b) Indirect cost only (c) Direct and indirect cost (d) None of these	**1**	01	02	01	

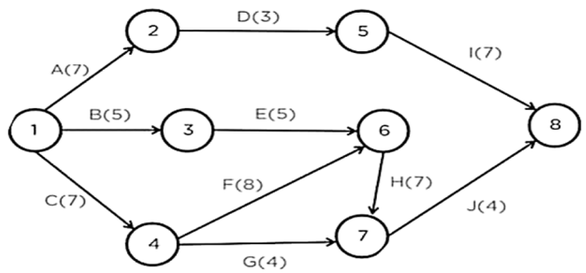
	vii.	Turn key contract is also known as- (a) Lump sum contract (b) Unit price contract (c) Integrated contract (d) Guaranteed maximum contract	**1**	01	02	01
	viii.	A legal documents or agreement between two parties is termed as- (a) Claim (b) Dispute (c) Contract (d) None of these	**1**	01	11	01
	ix.	On which axes, time lies on S-curve- (a) X- axis (b) Y- axis (c) Both A and B (d) None of these	**1**	01	11	01
	x.	Which software is used for scheduling work? (a) Primavera (b) Staad pro (c) Revit (d) All of these	**1**	01	11	01
Q.2	i.	Write any four importance of project scheduling.	**2**	01	02	01
	ii.	What are the various principles of construction management?	**3**	02	11	02
	iii.	Write about stages of project planning in detail.	**5**	02	11	02
OR	iv.	Write notes on- (a) Job layout (b) Pre tender planning	**5**	02	02	02
Q.3	i.	Define the following term with mathematical expression: (a) Earliest occurrence time (b) Latest occurrence time (c) Slack (d) Expected time	**4**	02	02	02
	ii.	Determine the value of Slack at each node and find the critical path of following network-	**6**	03	02	03



OR	iii.	From network given below, find the expected time for each of the paths. Also find the critical path, std. deviation, variance as well as the expected time for project completion.	**6**	03	02	03



Q.4	i.	Define float. Enlist various types of float.	**2**	02	02	02
	ii.	Calculate ES; EF; LS; LF and various floats by CPM. Also determine critical path of following figure:	**8**	04	03, 11	04



OR	iii.	Determine the optimum time and its corresponding cost up to which project should be crashed. Take Indirect cost is Rs.4K per week-	**8**	04	3, 11	04

Activity	NT (Weeks)	CT (Weeks)	NC (Rs)	CC (Rs)
1-2	6	4	7K	12K
1-3	8	7	4K	6K
2-3	4	1	6K	9K
2-4	5	3	8K	15K
3-4	5	4	5K	6.5K

Q.5	i.	Define construction closure and contract closure.	**4**	02	11	02
	ii.	Write various types of contracts and explain any two in detail.	**6**	02	11	02
OR	iii.	Write notes on- (a) Disputes (b) Construction project claims	**6**	02	11	02

Marking Scheme

CE3EC05 Construction Project & Management

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Q.1	i)	B-Job layout	**1**
	ii)	C -Invoice	**1**
	iii)	B-Event oriented	**1**
	iv)	A - Pessimistic time	**1**
	v)	A - Single time estimate	**1**
	vi)	C - Direct and indirect cost	**1**
	vii)	C - Integrated contract	**1**
	viii)	C - Contract	**1**
	ix)	A - X- axis	**1**
	x)	A - Primavera	**1**
Q.2	i.	0.5 Marks for Each	**2**
	ii.	1 Marks for Each	**3**
	iii.	1 Marks for Each	**5**
OR	iv.	2.5 Marks for Each	**5**
Q.3	i.	1 Marks for Each	**4**
	ii.	3 Marks for Value of Static & 2 Marks for finding critical point 1 mark for final	**6**
OR	iii.	2 Marks for expected time & 1 Marks for Critical Path & 1.5 Marks for Variance & 1.5 Marks for Deviation	**6**
Q.4	i.	0.5 Marks for Definition & 1.5 Marks for Types	**2**
	ii.	1.5 Marks for Each ES, EF, LS, LF + 2 marks critical path	**8**
OR	iii.	2 Marks for Time determination & 1 Marks for Each step of cause determination.	**8**
Q.5	i.	2 Marks for Each	**4**
	ii.	2 Marks for name of type & 2 Marks for each type	**6**
OR	iii.	3 Marks for Each A & B	**6**
Q.6			
	i.	1 Marks for Each point	**5**
	ii.	1 Marks for Each point for correct description	**5**
	iii.	1 Marks for reason & 2 Marks for Each method	**5**

P.T.O.