



BRAINWARE UNIVERSITY

Term End Examination 2023-2024 Programme – Dip.CE-2022 Course Name – Construction Management Course Code - DCEPE401B (Semester IV)

Full Marks: 60 Time: 2:30 Hours [The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.] Group-A (Multiple Choice Type Question) 1 x 15=15 Choose the correct alternative from the following : (i) Identify the main goal of the construction industry organization: a) Profit maximization b) Quality construction c) Customer satisfaction d) Building and infrastructure development (ii) Identify the agency responsible for physically carrying out the construction work: a) Owner b) Promoter c) Builder d) Architect (iii) Identify the primary focus of the public construction industry: b) Social welfare d) Innovation c) Customer satisfaction (iv) Identify the primary purpose of site layout planning: a) Aesthetic appeal b) Efficient space utilization c) Quick construction d) Cost reduction (v) Identify the principle that governs the arrangement of buildings, roads, and utilities on a construction site: a) Aesthetic principles b) Functional principles c) Environmental principles d) Economic principles (vi) Select the factor that plays a crucial role in determining compensation for land acquisition: b) Market value of the land a) Architectural design c) Construction timeline d) Aesthetic considerations (vii) Select the primary role of soil conditions in site layout planning: a) Influences drainage and grading b) Dictates architectural design

c) Determines construction material choices

a) To increase project cost

c) To allot time efficiently

c) Line charts

c) Covering design costs

a) Guaranteeing project completion

a) Pie charts

(viii) Select the primary purpose of identifying broad activities in construction work:

(x) Select the purpose of performance bonds in construction contracts:

(ix) Select the graphical representation method commonly used for project schedules:

d) Affects the appearance of buildings

b) To improve project safety

b) Ensuring worker safety

b) Bar charts

d) Scatter plots

d) To enhance project aesthetics

d) Providing construction materials

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(xi)	Choose the type of contract that provides the highest degree of cost certainty for the owner:			
	a) Cost Plus Fixed Fee Contract	b) Lump Sum Contract		
	c) Time and Material Contract	d) Unit Price Contract		
(xii)	Choose the definition of a force majeure clause in a construction contract: b) Legal escape clause for unforeseen events			
	a) Specification of project materials	d) Construction site safety regulations	-	
/viii\	c) Payment schedule for the contractor Choose the definition of a bid bond in the context of			
(*****)	a) Bond for project completion	b) Bond for contractor qualifications		
	c) Financial guarantee for bid submission	d) Bond for project design		
(xiv)	xiv) Choose the meaning of PPE in the context of construction safety:			
	a) Professional Project Evaluation	b) Personal Protective Equipment		
	c) Project Planning and Execution	d) Public Policy Enforcement		
(xv)	hoose how the construction industry can address the issue of fatigue-related accidents:			
	a) Increase working hours	b) Provide adequate breaks and rest period	S	
	c) Avoid safety training	d) Ignore signs of fatigue		
	Grou	р-В		
	(Short Answer T	ype Questions)	3 x 5=15	
2. Describe the function of an engineer in construction work.				
3. Describe the function of architects in construction work.			(3)	
4. Ex	4. Explain the term Valuation of Land of land acquisition.			
	5. Explain the term overview of labor standards law and occupational safety and health regulations law.			
6. Ex	plain the term bar chart.	-	(3)	
-	Ol	R	(3)	
EX	plain the merits of a bar chart.		(3)	
	Grou	ıр-C		
	(Long Answer T	ype Questions)	5 x 6=30	

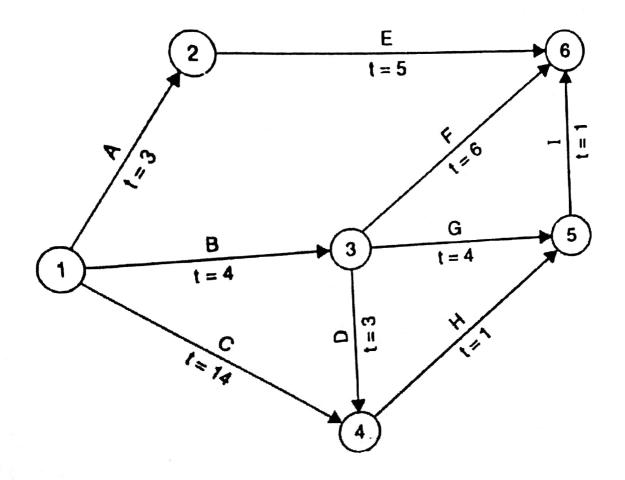
8. The network diagram shown in fig has the estimated duration for each activity marked. Determine the total float for

each activity and establish the critical path. Also determine free float and independent float for each activity.

(5)

(5)

7. Write down the all-labor laws and acts pertaining to civil construction activities.



- 9. Describe the role of consultant for various activities in a construction organization.
- 10. Explain a short note about the cost-plus contract and the guaranteed maximum price contract.
- 11. Explain in brief the differentiate between PERT and CPM networks.
- 12. The activity breakdown for a certain project is as under.

Activity No.	Duration (weeks)	
1	1	
2	2	
3	4	
4	3	
5	1	
6	2	
7	4	

Activity 2 and activity 3 can be done concurrently, and both must follow activity 1. Activity 2 must precede activity 4. Activity 5 cannot begin until both activities 2 and 3 are completed. Activity 6 can be started only after activities 4 and 5 are completed. Activity 7 is the last activity which can be started only after completion of activity 5. Prepare the bar chart diagram for the project.

(5)

(5)

(5)

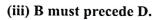
(5)

(5)

OR

A project consists of six activities (jobs) designated from A to F, with the following relationships:

- (i) A is the first job to be performed.
- (ii) B and C can be done concurrently, and must follow A.



- (iv) E must succeed C, but it cannot start until B is complete.
- (v) The last operation F is dependent on the completion of both.

Draw the network diagram for the project.
