

1. Group - A (Short Answer Questions)

S. No	QUESTION	Blooms Taxonomy Level	Course Outcome
UNIT-I FUNDAMENTALS OF CONSTRUCTION TECHNOLOGY			
1	Write a short note on record	Understanding	a
2	Write a short note on document	Understanding	b
3	Write a short note on construction activities	Understanding	d
4	Write a short note on construction process	Understanding	d
5	Write a short note on construction schedule	Understanding	b
6	What are safety related problems in Indian construction industry?	Understanding	a
7	Explain how the total cost of the project is influenced by safety aspects in construction industry	Evaluate	b
8	Write a short note on construction quality	Evaluate	d
9	Write a short note on construction safety	Analyze	a
10	write about codes and regulations	Remembering	a

UNIT-II			
CONSTRUCTION METHODS			
1	Write a short note on construction methods	Understanding	e
2	What is earthwork?	Remembering	e
3	What is piling?	Creating	e
4	What is concrete?	Remembering	e
5	What is cold weather concreting?	Evaluate	e
6	What are different types of concreting?	Understanding	f
5	What is hot weather concreting?	Evaluate	e
7	What is formwork?	Understanding	f
8	What is fabrication?	Evaluate	g
9	Explain different types of fabrication techniques	Evaluate	g
10	What is erection?	Analyze	g
UNIT-III			
MECHANISED CONSTRUCTION			
1	what is mechanized construction	Remembering	h
2	Discuss regarding different construction equipment	Understanding	h
3	Define equipment economics	Understanding	h
4	write about Excavators	Evaluate	i
5	What are rollers?	Evaluate	i
6	What are dozers?	Evaluate	i
7	What are scrapers?	Understanding	i
8	What are handling equipment?	Evaluate	i
9	What are hauling equipment?	Evaluate	j
10	What are cranes?	Remembering	j
UNIT-IV			
QUALITY CONTROL, ASSURANCE & SAFETY			
1	What is quality control?	Remembering	
2	What is quality assurance?	Remembering	
3	What is quality safety?	Understanding	k
4	Explain about ISO 9000 Quality systems	Remembering	
5	What are principles of safety?	Analyze	
6	Write a short note on personnel safety	Evaluate	k
7	Write a short note on fire safety	Evaluate	k
8	Write a short note on electrical safety	Remember	f
9	Write a short note on environmental protection	Remembering	k
10	What is green building? Write its concept	Understanding	
UNIT-V			
CONTRACT MANAGEMENT			
1	What is a contract?	Evaluate	m
2	Explain the classification of contracts	Understanding	n
3	What is contract management in construction industry	Remember	n
4	What is project estimation?	Apply	m
5	Explain the types of estimation	Remember	m

6	What is bidding?	Create	m
7	What is procurement in construction industry	Apply	m
8	Explain about activities in contract management	Evaluate	n
9	Explain about types of bidding	Remember	m
10	Explain about types of procurement	remember	o
UNIT-VI			
CONSTRUCTION PLANNING			
1	What is construction planning?	Evaluate	M
2	What are the objectives of planning?	Understanding	n
3	Define the term Activity?	Remember	n
4	Define the term Float?	Apply	m
5	Define critical path?	Remember	m
6	What is a dummy activity?	Create	m
7	What are the Activities involved in planning?	Apply	m
8	What are the types of project plans?	Evaluate	n
9	Explain about planning of manpower & material	Remember	m
10	Explain about equipment & finance plan	remember	o
UNIT-VII			
PROJECT SCHEDULING			
1	What is the object of scheduling?	Evaluate	m
2	List out the advantages of scheduling.	Understanding	n
3	Define PERT?	Remember	n
4	Define LST and LFT?	Apply	m
5	Define EST and EFT?	Remember	m
6	What are the classifications of networks?	Create	m
7	Discuss resource leveling & allocation	Apply	m
8	Discuss different types of schedules	Evaluate	n
9	Define float and Total float	Remember	m
10	What is the purpose of numbering events?	remember	o
UNIT-VIII			
CONSTRUCTION CLAIMS, DISPUTE & PROJECT CLOSURE			
1	Write a short note on construction claims	Understanding	e
2	Write about construction disputes	Remembering	e
3	Write about the method of project closure	Creating	e
4	Write about source of claims	Remembering	e
5	State briefly regarding claim management	Evaluate	e
6	Write a short note on dispute resolution	Understanding	f
7	Write a short note on arbitration	Understanding	f
8	Write a short note on construction closure	Evaluate	g
9	Write a short note on contract closure	Evaluate	g
10	Write a short note on construction project documentation	Analyze	g

2. Group - II (Long Answer Questions)

S. No	QUESTION	Blooms Taxonomy Level	Course Outcome
UNIT-I			
FUNDAMENTALS OF CONSTRUCTION TECHNOLOGY			
1	What is the difference between record & document? For a single storey residential building prepare a construction schedule. Assume suitable data real vent to building	Understanding	a
2	Write about construction documents , mention their importance & significance in any project	Understanding	b
3	Write about activities involved in construction projects? How do you prepare construction schedules & records?	Understanding	d
4	Write in detail about i) construction processes ii) construction schedule iii) construction activities	Understanding	d
5	Write about construction schedule , mention their importance & significance in any project	Understanding	b
6	Write about construction quality , mention its importance & significance in any project	Evaluate	d
7	Write about construction safety , mention the importance & significance in any project	Analyze	a
8	write about construction codes & mention any few of them	Remembering	a
9	write about construction regulations & mention any few of them	Understanding	F
10	Discuss the role of the government in growth of construction industry	Understanding	F

UNIT-II			
CONSTRUCTION METHODS			
1	What is earthwork? Write about the process of site development for construction activity & mention any 3 types of excavation processes	Remembering	e
2	What is piling? Discuss their advantages & explain the classification of piles based on material, use & requirements	Creating	e
3	What is piling? Write about the methods of pile driving and Mention the causes for failure of piles	Remembering	e
4	What is concreting? Explain about different types of concreting methods & mention their effects in each type	Evaluate	e
5	Write about cold weather concreting, hot weather concreting & mention their effects on concrete. Specify the recommended practice & precautions	Understanding	f
6	What is a formwork? Explain their objectives, requirements & materials of formwork.	Understanding	f
7	What is fabrication? Explain about welding & write in detail regarding MMA, TIG, SAW, MIG.	Evaluate	g
8	Explain different types of welding & mention their properties in detail	Evaluate	g
9	What is erection? Explain how erection is carried out & steps involved in	Analyze	g

	successful erection of structures		
10	Describe briefly about non destructive tests carried out on fabricated steel structures & mention their importance	Understanding	F
11	Discuss in detail the various units in concrete production plants	Understanding	F
12	What is workability? Discuss various methods of measuring workability & mention the steps to be taken to make concrete durable	Understanding	f

UNIT-III			
MECHANISED CONSTRUCTION			
1	What is mechanized construction? Explain the factors on which the deployment of construction equipment & equipment selection depends.	Remembering	h
2	Discuss regarding different construction equipment available and mention about any 4 of them in detail with neat sketches	Understanding	h
3	Explain about the classification and types of construction equipment available	Understanding	h
4	Write about Excavators? Write about the working mechanism of power shovel, backhoe & mention their characteristics	Evaluate	l
5	What are rollers? Differentiate them depending upon the operation and mention about any 3 of them in detail with neat sketches	Evaluate	i
6	What are dozers? Discuss their classification & mention their uses and advantage over other earthmoving equipment	Evaluate	i
7	What are scrapers? Discuss their classification and mention their purpose with neat sketches	Understanding	i
8	What are handling equipment? Write about their classification ,uses & advantages with neat sketches	Evaluate	i
9	What are hauling equipment? Write about their classification ,uses & advantages with neat sketches	Evaluate	j
10	What are cranes? Discuss their classification and mention their purpose with neat sketches	Analyze	j
11	Discuss regarding Clamshalls, mention their purpose and advantages over other equipment with neat sketches	Understanding	i
12	Write about draglines and mention their uses & applications along with neat sketches	Understanding	i
13	Why is the mechanization based on rented construction equipment is cost effective? Write about basic types of earth moving equipment with neat sketches	Understanding	i
14	Describe the classification of construction equipment. Explain how do you arrive at the necessity of hiring or purchasing the equipment?	Understanding	i

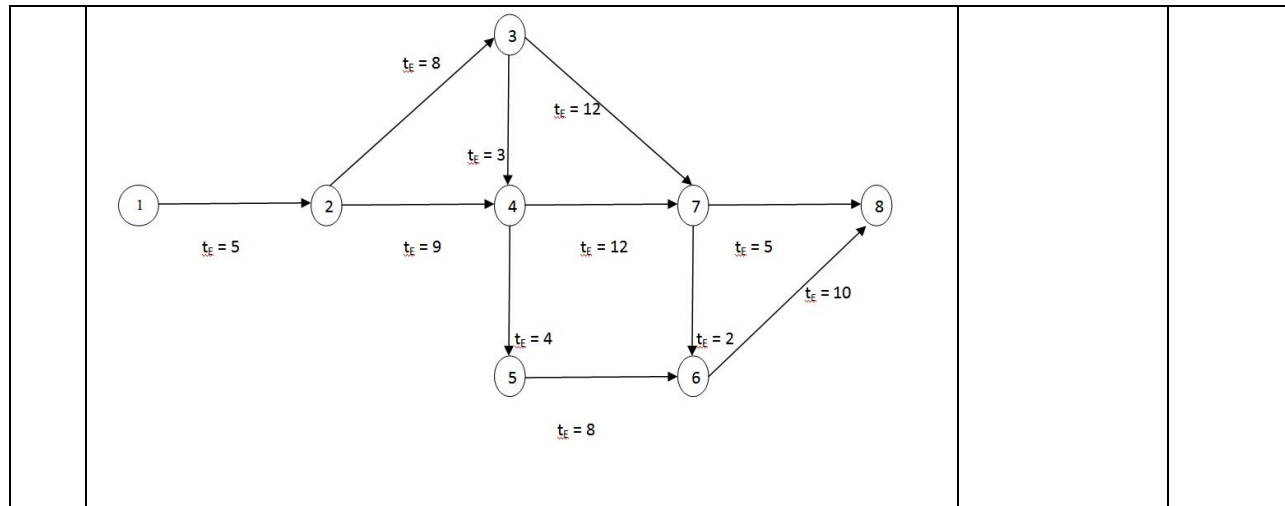
UNIT-IV			
QUALITY CONTROL, ASSURANCE & SAFETY			
1	What do you understand by quality control & quality assurance? Explain in detail what does they contain?	Remember	H
2	What do you understand by quality assurance & quality safety? Explain in detail what does they contain?	Remember	H
3	Give a detailed account of accident investigation & its prevention	Understanding	K

4	Explain about ISO 9000 Quality systems & mention any 8 clauses in detail	Evaluate	J
5	What is quality manual? Discuss in detail what does it contain?	Analyze	J
6	What is quality improvement? Discuss in detail what is meant by continual improvement?	Analyze	
7	What are principles of safety? Explain in detail about personnel safety	Evaluate	K
8	What are principles of safety? Explain in detail about fire safety	Evaluate	K
9	What are principles of safety? Explain in detail about electrical safety	Remember	F
10	Explain in detail about environmental protection	Evaluate	K
11	What is green building? Write its concept with an example. Assume suitable data	Understanding	I

UNIT-V CONTRACT MANAGEMENT			
1	What is a contract? Explain the classification & types of contracts	Evaluate	M
2	Discuss the categories of contract in detail and differentiate them with respect to their characteristics	Understanding	N
3	What is contract management in construction industry & discuss about it in detail	Remember	N
4	What is project estimation? Explain the types of estimation & discuss about different types of estimates with advantages & disadvantages	Apply	M
5	What is sub contracting? Discuss about the different types of sub contractors & also discuss about integrated contract	Remember	M
6	What is bidding? Explain the different types of bidding	Create	M
7	What is procurement in construction industry explain in detail	Apply	M
8	Explain about activities in contract management	Evaluate	N
9	Explain about types of bidding & classify the various process in contracts	Remember	M
10	Explain about types of procurement & classify the various process in contracts	Remember	O
11	Explain the different types of contracts for execution of civil engineering works. List the advantages & disadvantages of each type	Understanding	N
12	Explain various project planning techniques available in construction industry?	Understanding	N
UNIT-VI CONSTRUCTION PLANNING			
1	Define planning. Discuss about the various activities involved in construction planning	Understanding	E
2	Explain various project planning techniques available in construction industry?	Remembering	E
3	What is construction planning? What are the objectives of planning?	Creating	E
4	What are the types of project plans? Explain in detail	Evaluate	G
5	Explain in detail about planning of manpower & material	Analyze	G
6	Explain in detail about equipment & finance plan	Understanding	f
7	The construction industry is facing a severe shortage of skilled man power –	Understanding	F

	discuss with particular examples																
8	The equipment necessary for the project decides the cost – Explain?	Understanding	F														
9	Discuss the classification of construction equipment?	Understanding	F														
10	How do you arrive at necessity of hiring or purchasing the equipment?	Understanding	F														
11	What are different types of crushers used production of aggregate? Describe the operation of each type briefly	Understanding	F														
UNIT-VII																	
PROJECT SCHEDULING																	
1	What are the methods of project scheduling? What is meant by scheduling & controlling?	Remembering	H														
2	What do you mean by PERT? Explain its significance. Plot a neat sketch for different time estimates	Understanding	h														
3	<p>The following table gives the activities in a construction project</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Activity</th> <th>Duration (days)</th> </tr> </thead> <tbody> <tr> <td>1-2</td> <td>20</td> </tr> <tr> <td>1-3</td> <td>25</td> </tr> <tr> <td>2-3</td> <td>10</td> </tr> <tr> <td>2-4</td> <td>12</td> </tr> <tr> <td>3-4</td> <td>6</td> </tr> <tr> <td>4-5</td> <td>10</td> </tr> </tbody> </table> <p>i) Draw the network for the project ii) Find the critical path iii) Find the free float, total float & independent float for each activity</p>	Activity	Duration (days)	1-2	20	1-3	25	2-3	10	2-4	12	3-4	6	4-5	10	Understanding	h
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4	What do you mean by CPM? Explain its significance. Plot a neat sketch for different time estimates & explain the Fulkerson's rules for numbering the events of a network	Evaluate	I														
5	<p>A project consists of 16 activities having their predecessor relationships as follows:</p> <p>i) A is the first activity of the project ii) B,C & D follow A and can be done concurrently iii) E & G cannot begin until C is completed and can be performed simultaneously iv) F is the immediate successor to activities B& E. v) H & k run in parallel & both succeed G vi) L succeeds F & H vii) I & J are immediate successor activities to activity D. viii) I & J are immediate successor to I & K. however both M & N can be performed concurrently ix) Activities O & P are the last activities. Activity O is the immediate successor to N & L. Activity P is the immediate successor to M & J.</p> <p>Draw the network & number the events</p>	Evaluate	i														
6	Differentiate between CPM & PERT? Explain what do you understand by resource leveling?	Evaluate	i														

7	Draw the network diagram for following data & find the critical path using floats. Also find the project duration	Understanding	i																																																								
	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 5px;">Succeeding activities</th> <th style="padding: 5px;">Preceding activities</th> <th style="padding: 5px;">Activities</th> <th style="padding: 5px;">Duration (Days)</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">A & B</td> <td style="padding: 5px;">---</td> <td style="padding: 5px;">A</td> <td style="padding: 5px;">10</td> </tr> <tr> <td style="padding: 5px;">C</td> <td style="padding: 5px;">B</td> <td style="padding: 5px;">B</td> <td style="padding: 5px;">5</td> </tr> <tr> <td style="padding: 5px;">D</td> <td style="padding: 5px;">A</td> <td style="padding: 5px;">C</td> <td style="padding: 5px;">3</td> </tr> <tr> <td style="padding: 5px;">E</td> <td style="padding: 5px;">C</td> <td style="padding: 5px;">D</td> <td style="padding: 5px;">6</td> </tr> <tr> <td style="padding: 5px;">F</td> <td style="padding: 5px;">C</td> <td style="padding: 5px;">E</td> <td style="padding: 5px;">7</td> </tr> <tr> <td style="padding: 5px;">G</td> <td style="padding: 5px;">F</td> <td style="padding: 5px;">F</td> <td style="padding: 5px;">6</td> </tr> <tr> <td style="padding: 5px;">H</td> <td style="padding: 5px;">G</td> <td style="padding: 5px;">G</td> <td style="padding: 5px;">5</td> </tr> <tr> <td style="padding: 5px;">I</td> <td style="padding: 5px;">C</td> <td style="padding: 5px;">H</td> <td style="padding: 5px;">8</td> </tr> <tr> <td style="padding: 5px;">J</td> <td style="padding: 5px;">H & I</td> <td style="padding: 5px;">I</td> <td style="padding: 5px;">4</td> </tr> <tr> <td style="padding: 5px;">K</td> <td style="padding: 5px;">E, J & D</td> <td style="padding: 5px;">J</td> <td style="padding: 5px;">6</td> </tr> <tr> <td style="padding: 5px;">L</td> <td style="padding: 5px;">H & I</td> <td style="padding: 5px;">K</td> <td style="padding: 5px;">4</td> </tr> <tr> <td style="padding: 5px;">M</td> <td style="padding: 5px;">K & L</td> <td style="padding: 5px;">L</td> <td style="padding: 5px;">3</td> </tr> <tr> <td style="padding: 5px;"></td> <td style="padding: 5px;"></td> <td style="padding: 5px;">M</td> <td style="padding: 5px;">2</td> </tr> </tbody> </table>			Succeeding activities	Preceding activities	Activities	Duration (Days)	A & B	---	A	10	C	B	B	5	D	A	C	3	E	C	D	6	F	C	E	7	G	F	F	6	H	G	G	5	I	C	H	8	J	H & I	I	4	K	E, J & D	J	6	L	H & I	K	4	M	K & L	L	3			M	2
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8	Explain in detail regarding resource leveling & mention its significance	Evaluate	i																																																								
9	For the network shown in figure i) What are the critical path & project duration? ii) If the estimated duration of activity C is revised to 8 days, will the critical path remain the same as earlier?	Evaluate	j																																																								
10	For the network shown in figure determine the slack for various events , if the scheduled date of completion of project is 36 days. Present the computations in tabular form	Analyze	j																																																								



UNIT-VIII			
CONSTRUCTION CLAIMS, DISPUTE & PROJECT CLOSURE			
1	Write a short note on construction claims & mention the source of claims	Understanding	e
2	Write about construction disputes & discuss regarding method of project closure	Remembering	e
3	Disputes in construction contracts are inevitable. Discuss the statement & write an explanatory note on powers of arbitration	Creating	e
4	Discuss the various dispute resolution mechanisms adopted by construction industry	Remembering	e
5	Explain in detail regarding claim management & dispute resolution	Evaluate	e
6	Write a short note on construction project documentation	Understanding	f
7	Risk distribution between the contractor & the owner goes a long way in laying the foundation for healthy relationship – discuss with examples	Understanding	f
8	Explain in detail regarding construction closure & contract closure	Evaluate	g
9	Discuss the role if computers in case of disputes & mention the need for maintaining the documents in construction industry	Evaluate	g
10	Write a short notes on any 4 of the following : i) Claim management ii) Contract closure iii) Arbitration iv) Types of estimation v) Contract documents vi) Planning of contract closure	Analyze	g