

Time: 3 Hours

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL 24

(A constituent unit of MAHE, Manipal)

I SEMESTER M.TECH. (CONSTRUCTION ENGINEERING AND MANAGEMENT) END SEMESTER EXAMINATIONS, NOV-DEC 2023 – REGULAR

SUBJECT: CONSTRUCTION PROJECT MANAGEMENT [CIE 5117]

(//2023)

MAX. MARKS: 50

Instructions to Candidates:

Answer ALL the questions., Missing data may be suitably assumed.

Q. No.		М	СО	BL							
1A	Execution of engineering	xecution of engineering contracts is different from setting up a manufacturing									
	project in many ways.	4	1	5							
	involvement in the project										
1B	Examine the prospects of	2	4	4							
	union budget 2023.	3		4							
1C	Evaluate the importance			_							
	construction project, cons	3	1	5							
2A	Every construction project	3	1	5							
2B	Assess the influence of			-							
	network-based method of	d method of project management with the help of a suitable illustration.									
2C	For the following schedule										
	determine the total float										
	calculations in the table fo										
		Activity	Duration	IPA							
		А	2	-							
	-	В	4	А		4	3	3			
		С	6	А							
		D	9	А							
	-	E	5	В							
		F	7	B, C							
		G	3	D, E, F							

Reg.	
No	Reg. No



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3A	For the following scl									
	determine the total f									
	table format.									
		Activity	Duration	IPA	Lag					
		A	5	-						
		В	6	А						
		С	4	А	3					
		D 5 A								
		E 9 B								
	F 7 B 2									
		C								
		G 6 C								
		D 4								
		l								
		J								
		K	4	F, G, H						
		L	1	H	3					
		M	2	J, K, L						
3B	Perform the forwar									
	below. Mark the crit									
	in the table format.									
	in the table formal. $3 \qquad C \\ 4 \qquad H \\ 9 \qquad H \\ 10 \qquad H \\ 9 \qquad H \\ 9 \qquad H \\ 10 \qquad H \\ 9 \qquad H \\ 12 \qquad $								3	
			F 10		G 20					

Reg.					
No					



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4A	IIIu	ustrate the	calcu	lation of to	tal floa	at, free float,	and in	depender	nt f	loat of an activity	y.			
	Di	scuss the s	signifi	icance of e	ach ty	pe of float in	the co	nstructior	n p	roject.		3	3	3
4B	Fc	or the given	n proje	ect,										
		a) Draw	the p	precedence	cedence network and perform CPM computations.									
		b) Alloca	ate th	e required	resou	esources and identify overallocation if the number of								
		labore	ers av	vailable is i	restrict	stricted to 6 per day.								
		c) Impro	ove th	e labor usa	labor usage profile by levelling the resources.									
				Activity IPA Duration		Duration (Days) Laborer		rs			7	4	4
		A		-	5		2							
		В		-	7		4							
		C		А	3		3							
				D	Α, Β	., B 5		3						
				E	C, D	2		2	2					
5A	Fc	or the giver	n activ	vity interde	pende	ncy, draw the	e time	-scale ne	twc	ork at each stage	ə,			
	cra	ash the pro	oject ι	up to three	stages	s, and preser	nt the o	direct, ind	lire	ct, and total cost	s			
	at	each crash	ning s	stage in a t	able fo	ormat.								
	Th	e indirect o	cost p	per month i	s 3,50	00 (in hundreds) INR.								
			١	lormal No		Normal Cost		Crash Cr		Crash cost				
		Activity	D	uration	(in	hundreds)	dur	ation	(ir	(in hundreds)		-		
			(n	nonths)	(,	(mc	onths)		,		Э	4	4
		1-2		4		18,000		3		25,500				
		1-3		8		15,000		5	19,500 19,000					
		2-3		6		17,000		4						
		2-4		9		19,000		7		26,000				
		3-4		5		16,000		3		22,000				
5B	IIIu	ustrate the	parar	neters use	d for p	roject monito	ring ar	nd control	lus	ing Earned Valu	е	F	F	2
	Analysis.										5	σ	3	