WARED BY LINE

MANIPAL INSTITUTE OF TECHNOLOGY

(A constituent unit of MAHE, Manipal)

II SEMESTER M.TECH. (CONSTRUCTION ENGG. & MANAGEMENT) END SEMESTER EXAMINATIONS, MAY 2023

SUBJECT: CONSTRUCTION MATERIAL MANAGEMENT [CIE 5001]

REVISED CREDIT SYSTEM

Date of Exam: /05/2023

Time of Exam:

Max. Marks: 50

Instructions to Candidates:

✤ Answer ALL the questions & missing data may be suitably assumed

No		Marks	CO	BL					
1A	Identify the fu	2	1	3					
	Apply XYZ and HML to classify the following data on materials. Conclude based on the resulting control matrix. Assume ordering and carrying costs at 15% and 10% of the unit cost.SI.no.Unit cost (x10³ ₹)Average inventoryNo. of orders								
		2	60 60	17	8				_
1B		4	0.4	326	3		8	2	4
		5	0.1	86	44	-			
		6	30	12	5				
		7	1.5	41	21				
		8	1.5	38	19				
		9	1.2	44	21				
		10	0.8	57	29				
		11	0.1	233	50				
2A	Apply nume codification.	5	2	3					
2B	Develop a general format material plan using the knowledge of the i) WBS, ii) BOQ, iii) rate analysis iv) quantity takeoff.							3	3

	Th co teo W1	e table s nsecutive chnique ar =0.35, w ₂ =	hows year nd foi =0.25	the t s. An recast , and v	ime-se alyze the p w3=0.4	eries the c rices I.	data data for th	of ste using ie next	el ret the v : 12 n	oar pr veight nonths	ices p ed mo s. Ass	er kg oving ume	i for t avera n=3, a	wo age and			
					2021	Pri	ce	2022	Pr	ice							
					Jan	44	.5	Jan	46	5.3							
					Feb	41	.9	Feb	47	7.8							
					Mar	41	.7	Mar	58	3.5							
3A					Apr	42	.3	Apr	49	9.3					5	4	4
					May	55	.8	May	50).5							
					June	56	.1	June	46	6.7							
					Jul	55	.5	Jul	43	3.4							
					Aug	55	.4	Aug	39	9.6							
					Sep	55	.3	Sep	39	9.8							
					Otc	58	.8	Otc	39	9.6							
					Nov	42	.9	Nov	38	3.1							
					Dec	44	.2	Dec	38	3.4							
	As int	sess the pernal rate	orofita of ret	able in urns n	vestm nethoc	ent op d at r=	otion I 11%	betwee and sa	en equ Ivage	ipme value	nt A ai e at 10 ^e	nd B । %.	using	the			
		Equipme	nt .	Capi	tal	GAF	R (lak	hs ₹)	AD	ED (la	ikhs ₹) U	seful				
3B			Ir	ivestr (lakhs	nent s₹)							()	lite vears)		5	4	5
		А		1.8	}	0.9, 0.7	0.95, 5, 0.6	, 0.8, , 0.5	0.3 0.25	45, 0. 55, 0.2	3, 0.3, 285, 0.3	3	6				
		В		2.8	;	1.5, 1.95	1.6, ⁻ 5, 1.85	1.75, 5, 1.8	0.7	, 0.75 75, 0. ⁻	, 0.65, 7, 0.8		0				
	Th pu ea mo	e table sl rchase sti ch month onths.	hows rategy is 2	forec / and 00 ba	asted budge ags, a	price: et the nd th	s for expe e ma	cemer enditur ximum	nt per e. Th n stor	bag. e requage c	Deve uireme apacit	elop a ent fo sy is	suita r cem for th	ble ent ree			
4A		Month	1	2	3	4	5	6	7	8	9	10	11		5	4	3
		Price ₹	315	309	261	280	296	306	312	298	264	312	300				
		Month	12	13	14	15	16	17	18	19	20	21	22				
		Price ₹	272	259	278	302	255	283	260	283	256	287	308				
4B	Сс	mpare the	e met	hodolo	ogy of	the m	oving	avera	ge me	ethod	with its	s alter	native	s.	3	4	5
4C	Cla	assify vari	ous ir	vento	ry cos	ts ass	ociate	ed with	large	cons	tructio	n proj	ects.		2	5	4
5A	IIIu	strate hov	v the	invent	ory co	sts ar	e bala	anced	using	EOQ.					2	5	3
5B	A with average of a with a wit	construction in a stand erage lead 5 days. Th dering cos	on pro dard d time he un t is ₹	bject re deviat is 2 c it cost 200. [equire ion of lays, a t of ce Develo	s 1,50 19,0 Ind the ment p a Q),000 00 ba e max is ₹ 4 -Syst	bags of ags. The kimum 430, the em for	of cen he re lead t e can 5 cyc	nent fo liability ime w rying o les.	or 320 y facto vith a 3 cost is	work or k= 5% p 20%	ing da 1.65, robabi , and	ys, the ility the	8	5	3
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	1	300	2
	2	375	2
	3	175	4
	4	400	2
	5	350	2