GUJARAT TECHNOLOGICAL UNIVERSITY B. E. - SEMESTER – III • EXAMINATION – WINTER 2012

Subj	ject c	ode: 132905		Date: 03-01-2013		
Subj Tim	ject N e: 10.	xtile Total Marks: 70				
Inst	ructi	ons:				
	1. 2. 1 2. 1 3. 1	Attempt all quest Make suitable ass Figures to the rig	ions. umptions wherever no ht indicate full marks.	ecessary.		
Q.1	(a)	1. What is work 2.List out proce	x study? Explain its b ess chart events and si measurement technic	asic procedure. how it as symbol	07	
	(b)	1.Write short n 2. Explain abou	ote on SIMO chart it micro motion study	/	07	
Q.2	(a)	1. Compare CPM & PERT method for project planning.				
		2. Explain step	er for time study.			
	(b)	1. Define critic	h example.	07		
		2.Explain follo	4 1'1 1 4'			
		Optimistic ti	, most likely time			
	(b)	1 Compare wo	OK e study	07		
	(0)	2. Compare sta	ndard time & basic ti	me.	07	
Q.3	(a)	Information on	for project is as follows.	07		
		Activity	Duration			
		1-2	2			
		1-3	7			
		1-4	8			
		2-5	3			
		3-5	6			
		3-6	10			

Draw the network
 Compare Earliest time and Latest Time
 Find Critical path.

4

6

2 5

6

3-7

4-6

5-7

6-8 7-8 Q.3 (a) A workshop has five machines with five jobs to perform. Time study (in 07 hours) each man will take to perform each job is given below.

	Machines					
JOBS		Ι	II	III	IV	V
	А	9	5	12	12	14
	В	3	9	16	12	6
	С	9	6	2	2	2
	D	7	11	9	7	12
	Е	7	9	10	4	12

How should the jobs be assigned one per worker so as to minimize total man hour?

(b) Solve the optimal solution to the following transportation problem by 07 MODI method to minimize the transportation cost from given data.

	D1	D2	D3	D4	Availabl
					e
01	23	27	16	18	30
02	12	17	20	51	40
03	22	28	12	32	53
Require	22	35	25	41	123
d					

The cell entries are unit transportation cost.

Q.4 (a) Explain the distribution of steam water and compressed air in textile 07 industries.

(b)	1. Explain humidification and dehumidification	07
	2.Define:Relative Humidity, Wet Bulb Temp, DPT.	
	OD	

OR

- Q.4 (a) 1. Explain functions or elements of preventive maintenance.
 Q.1 Differentiate between break down maintenance and predictive maintenance.
 Q.2 (b) Explain humidification by air washer method with neat sketch.
 Q.4 (b) Explain humidification by air washer method with neat sketch.
- **Q.4** (b) Explain numidification by air wasner method with neat sketch.
- Q.5 (a) What is fire tube boiler? Explain any one fire tube boiler with neat sketch. 07 (b) What is boiler feed water treatment? Explain how it is carried out? 07 OR
 Q.5 (a) 1What is water tube boiler? Why it is preferred over fire tube boiler? 07 2.Name important factor while selecting a boiler
 - (b) Explain package type of boiler in detail?

07