Seat No.:	Enrolment No

GUJARAT TECHNOLOGICAL UNIVERSITY BE- VIth SEMESTER-EXAMINATION - MAY- 2012

•	ubject code: 161907 Date: ubject Name: Industrial Engineering		24/05/2012
Time	e: 10:	:30 am – 01:00 pm Total I	Marks: 70
1. 2. 3.	Atte Mak	ons: empt all questions. ke suitable assumptions wherever necessary. ures to the right indicate full marks.	
Q.1	(a) (b)	Define plant lay out. discuss following types of plant layout (1) Process layout (2) Group technology (3) Fixed position layout Wrote briefly on (1) work flow diagram (2) operation process chart (3) machine data cards	07
Q.2	(a) (b) (c)	Write the functions included under the activity of production planning What is economic order quantity? Discuss the following methods of sales forecasting (1) exponential smoothing (2) methods of weighted moving average OR	. 04 03 07
	(c)	What is line of balancing? discuss in detail assembly line balancitaking suitable example	ng 07
Q.3	(a) (b) (c)	What are factories act? What are major provisions for safety and healt. State various sources of industrial finance. State various government incentives to entrepreneurs. OR	h? 07 04 03
Q.3	(a) (b)	State various methods of job evaluation , discuss in brief. Define wages and explain in detail various types of incentives.	07 07
Q.4	(a)(b)	various tools for increasing productivity. State the relationship between cumulative timing and fly back timin How standard time is calculated?	
Q.4	(a)	OR What is method study? Explain in brief various charts and diagramm utilized in method study.	nes 07
Q.5	(b) (a)	What is therblig? State the importance of micro motion study. State the advantages of S. Q. C. what attribute and variable qual	07 ity 07
ν	, ,	characteristics are.	
	(b)	Find UCL and LCL for following data Sample no R	07
		Sumple no.	

1	26.0	35
2	34.0	17
3	28.5	18
4	32.75	22
5	29.25	31
6	29.25	15
7	26.0	19
8	24.75	29
9	27.25	18
10	30.25	9

Take A2=0.73, D3=0, D4=2.28,d2=2.059

		OR	
Q.5 (a)		Explain following terms	
		(1) quality assurance	
		(2) quality and inspection	
		(3) T. Q. M.	
	(b)	Explain in detail how P chart and C chart are constructed?	07

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