Seat No.:	Enrolment No.
Jeal 110	Lindinent 140.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

B. E. - SEMESTER - IV • EXAMINATION - WINTER 2012

	•	ct code: 141501 Date: 31/12/2012	
T	ime:	ct Name: Productivity Engineering 02.30 pm - 05.00 pm  Total Marks: 70	
Iı		1. Attempt any five questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 4. Answer should be to the point.	
Q.1	(a)	Define the following terms (Any two)  (i) Production  (ii) Value  (iii) Work study  What are the full forms of the following terms:  (i) ERP  (ii) SAP	2.5x2 +2=0 7
	<b>(b)</b>	What are the measuring parameters to increase productivity?	07
Q.2	(a)	Discuss the productivity improvement techniques based on the following parameters:  (i) Technology based  (ii) Material based	3.5x2 =07
	<b>(b)</b>	Draw a neat and logical flow sheet of a product cycle and briefly describe it.	07
		OR	
	<b>(b)</b>	Define Total Productivity Measure (TPM). What are the basic features of this measurement (TPM)?	2+5= 07
Q.3	(a)	Define the following terms:  (i) Method study  (ii) Work measurement  "Work study is a powerful tool for improving productivity" justify the statement.	2.5x2 +2=0 7
	<b>(b)</b>	What are the steps involved in work study? Discuss. <b>OR</b>	07
Q.3	(a)	Discuss the following considerations for method study:  (i) Economic aspect  (ii) Technical aspect	3.5x2 =07
	(b)	What type of sign languages are used for the following terms:  (i) Operation  (ii) Inspection  (iii) Transportation  (iv) Delay  (v) Storage  What are the basic objectives of method study?	5+2= 07
$\Omega A$	(a)	What is the nurnose of work measurement? Mention various techniques of work	3⊥4–

**07** 1

measurement.

	<b>(b)</b>	What are the steps related to time study? Discuss.	07
		OR	
Q.4	(a)	What are the advantages of work sampling compare to time study?	07
Q.4	<b>(b)</b>	Define work sampling.	3+4=
		$N = 4(1-P)/A^2P$ Just mention the notions used in this equation	07
Q.5 (a)	(a)	Define plant layout. What are the principles of plant layout? What are the advantages of plant layout?	1+3+ 3=07
	<b>(b)</b>	Compare between product lay out and process layout.	07
		OR	
Q.5 (a	(a)	What are the objectives of material handling? Draw a neat and logical flow sheet	2+3+
		of a material planning process. What are the material handling factors?	2=07
	<b>(b)</b>	Define the term organization. How do you categorize organizational resources?	2+3+
		"Value engineering is a cost preventive technique" justify the statement.	2=07

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