Seat No.:	
No	

Enrolment

## **GUJARAT TECHNOLOGICAL UNIVERSITY** BE - SEMESTER-VII • EXAMINATION – SUMMER • 2015

Subject Code: 171502			Date: 08/05/2015	
r -	•	ect Name: Work System Design :02.30pm-05.00pm Total Marks: 70 ctions: 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.	0	
Q.1	(a)	Define work study. Describe the role of work study – man in successful implementation of techniques of work study.	07	
	<b>(b)</b>	Define critical examination as applied to work study and explain its function in work simplifying program.	07	
Q.2	(a) (b)	"Application of work study is 10% technical and 90% psychological". – Explain. What is the purpose of man-machine chart ? When would you recommend to prepare this chart ? Why ? – Discuss. State its advantages. OR	07 07	
	<b>(b</b> )	How would ergonomics help to analyze man-machine system ? Can this study improve the work – station layout ? How ? – Discuss.	07	
Q.3	(a) (b)	Explain the difference between FPC and two handed process charts. Explain in brief various techniques used to study path movements during method study and also state their application.	07 07	
Q.3	(a)	<b>OR</b> Explain classification of movements and draw sketches showing normal and maximum working area.	07	
	<b>(b</b> )	Write note on : Use of films in method analysis.	07	
Q.4	(a)	What do you understand by the term 'work measurement' ? What is its relationship with method study ? What are the objectives of work measurement in an industry ?	07	
	(b)	The total observed time for an operation (i.e. assembling of an switches) is 4.00 min. If the rating is $110 \%$ , find normal time. If total allowances allowed are $12 \%$ for that job, determine the standard time. <b>OR</b>	07	
Q.4	(a)	Explain different methods of using/reading stopwatches.	07	
-	<b>(b</b> )	Discuss the concept of standard time. Explain clearly the steps involved in arriving at standard time.	07	
Q.5	(a)	What do you understand by performance rating ? Explain the application of performance rating using suitable example.	07	
	<b>(b)</b>	Discuss types of allowances.	07	
		OR		
Q.5	(a) (b)	Explain work sampling with suitable example.	07 07	

(a) Explain work sampling with suitable example.(b) Write brief note on : (i) PMTS (ii) MTM

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