

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII • EXAMINATION – WINTER • 2014****Subject Code: 172502****Date: 02-12-2014****Subject Name: Productivity Improvement Methods****Time: 10:30 am - 01:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Define productivity. What are the factors help increasing the productivity? **07**  
 (b) Write a brief note on work study. Differentiate between method study and work measurement. **07**
- Q.2** (a) Explain objectives of plant maintenance in detail. **07**  
 (b) Which symbols are used to make different charts and diagrams in method study? Illustrate them with brief description. **07**
- OR**
- (b) How does man-machine chart differ from multiple activity charts? **07**
- Q.3** (a) Describe the different principles of ergonomics. **07**  
 (b) The equipment design plays an important role in improving the productivity”, Explain. **07**
- OR**
- Q.3** (a) What do you understand by minimum wage, fair wage and living wage? Which are desired characteristics of good wage system? **07**  
 (b) What is incentive? How financial and non financial incentives play an important role in efficiency of workers? **07**
- Q.4** (a) Briefly explain the importance of string diagram and travel chart with illustration. **07**  
 (b) Write a brief note on information recording. **07**
- OR**
- Q.4** (a) Write a brief note on two handed process chart. **07**  
 (b) List different techniques for work measurement. Explain PMTS in detail. **07**
- Q.5** (a) Define Business Process Reengineering (BPR). Explain the requirements of BPR. **07**  
 (b) Draw a record sheet and explain the necessity of it in maintenance department. **07**
- OR**
- Q.5** (a) List and explain the steps involved in BPR. **07**  
 (b) Differentiate between breakdown and preventive maintenance. **07**

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