

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-IV • EXAMINATION – SUMMER • 2014**

**Subject Code: 141501****Date: 25-06-2014****Subject Name: Productivity Engineering****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 is the difference between production and productivity? **07**  
(b) How will you measure productivity in service industries? **07**
- Q.2** (a) State principles of motion economy related to human body. **07**  
(b) Discuss and explain fully the practice of 'Critical examination' in work study. **07**
- OR**
- (b) Describe various stages of method study. **07**
- Q.3** (a) Explain the importance of standardization of methods before taking time study. **07**  
(b) How will you proceed to train workers in the proposed method? **07**
- OR**
- Q.3** (a) Distinguish between operation process chart and flow process chart. **07**  
(b) Write note on 'Chromo cycle graph'. **07**
- Q.4** (a) What are the objectives of work measurement? **07**  
(b) Explain 'Rating' What are the various methods used for 'Rating'? **07**
- OR**
- Q.4** (a) Why a job is divided into elements for time study? Which are the various types of elements? **07**  
(b) Explain work sampling. **07**
- Q.5** (a) Identify the tools and techniques of plant layout. **07**  
(b) What are the functions and objectives of value engineering? **07**
- OR**
- Q.5** (a) Write a note 'Selection of materials handling equipments'. **07**  
(b) Define planning. Discuss objectives and pressure for which planning is considered to be essential in the operation of an industrial concern. **07**

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