

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VII • EXAMINATION – WINTER 2013

Subject Code: 171502**Date: 05-12-2013****Subject Name: Work System Design****Time: 10:30 TO 01:00****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 Work study. Discuss why work study is a direct means of raising productivity. **07**
- (b) Enlist the objectives of method study and work measurement. **07**
- Q.2** (a) Who was the originator of process charts ? Give objectives and limitations of OPC and prepare the same for assembly of a bicycle front wheel assembly. **07**
- (b) “Application of work study is 10 % technical and 90% psychological” explain. **07**
- OR**
- (b) Explain principles of motion economy. **07**
- Q.3** (a) Which are the factors for selection of a problem for method study. **07**
- (b) Importance of ergonomics in method study. **07**
- OR**
- Q.3** (a) Describe the suitable chart for “Repairing a fan by changing bearings”. Mention the improvements by comparing existing method and proposed method. **07**
- (b) Discuss the concept of standard time. Explain clearly the steps involved in arriving at standard time. **07**
- Q.4** (a) What do you understand by the term critical examination? Explain the procedure to carry out critical examination. **07**
- (b) Describe the elements and give break point for time study of the following operation : **07**
Machining of a 150 mm long, 25 mm diameter stud having threads 30 mm in one side and 60 mm on other side.
- OR**
- Q.4** (a) What is meant by rating ? who is rated ? What for ? Briefly explain different rating methods. **07**
- Q.4** (b) Why a job is broken down into elements in time study. **07**
- Q.5** (a) Explain PMTS and WFS. **07**
- (b) Procedure of making work sampling study with example. **07**
- OR**
- Q.5** (a) Which are the applications of W.M. **07**
- (b) Explain classification of movements. **07**
