## **GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-VII EXAMINATION – WINTER 2015** Subject Code: 171502 Date:07/12/2015 Subject Name: Work System Design **Time: 10:30am to 1:00pm 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. How it is related with different levels of management? 07 (b) How a job is selected with various considerations? 07 07 Q.2 (a) Explain the procedure of method study. How critical examination is carried out? 07 **(b)** OR (b) Prepare a flow chart for a job of your choice. 07 07 0.3 Prepare an operation process chart for an assembly of your choice. (a) (b) Explain principles of motion economy for tools and equipments 07 OR Explain principles of motion economy for human body movements. 07 0.3 **(a)** (b) Prepare a multiple activity chart for one man two machines. 07 **0.4** (a) Define therblig. Explain each of its components. 07 (b) Explain Analytical sampling. 07 OR **Q.4** Define time study. Explain various stop watches used . 07 **(a)** (b) Prepare a simo chart with suitable example. 07 07 Q.5 (a) Explain MTM. Explain the importance of work system design in an industry. 07 **(b)** OR Q.5 Explain the role of an industrial engineer in an industry. 07 (a) Explain PMTS. 07 **(b)**

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