Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER– VI • EXAMINATION – SUMMER-2017

Subject Code:X61904 **Date: 06/05/2017**

Subject Name: Industrial Engineering

Time: 10.30AM to 01:00PM **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)** Differentiate : Process layout v/s Product layout **07**

(b) List the factors which should be considered for the selection of site for the automobile Industry. **07**

Q.2 **(a)** What is P.P. C? Give the major objectives of the same. **04**

(b) What is line balancing? Discuss in detail assembly line balancing with suitable example. **07**

OR

(b) The sale of a product during last five yr. is tabulated below: **07**

Year	2006	2007	2008	2009	2010
Sale	4	8	6	10	14

Find (a) Equation of best fit line

(b) Forecast the sale in year 2011

Q.3 **(a)** Define Productivity? Discuss the factors affecting the Productivity of manufacturing organization. **07**

(b) Discuss the following: **07**

(i) Work study and Management

(ii) Work study and Worker

OR

Q.3 **(a)** Explain principle of motion economy & work place layout. **07**

(b) What is method study? Explain in brief various charts & diagram utilized in method study. **07**

Q.4 **(a)** Define the following term: **07**

(i) Nominal wage (ii) Real wage (iii) Living wage (iv) Minimum wage

(v) Fair wage (vi) Incentive (vii) Job Evaluation

(b) Explain Employee Provident Fund Act, 1952 **07**

OR

Q.4 **(a)** Discuss the rights and liabilities of Trade Union. **07**

(b) What do you understand by inspection? What are its objectives? **07**

Q.5 **(a)** Define the term: Quality and Quality control. Explain the needs of Quality Control in Industry **07**

(b) Explain the function of TQM **07**

OR

Q.5 **(a)** Define the term: (i) Mean (ii) Median (iii) Mode. And describe the method of constructing X bar and R charts. **07**

(b) Eight samples were taken for Quality Control and each time 4 pin diameters were measured. If mean diameter of pin is 8.5 cm & its standard deviation is 0.03 cm then find limits of control chart. Calculate process capabilities. **07**

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