

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) - EXAMINATION – SUMMER 2018

Subject Code:2161907

Date:05/05/2018

Subject Name: Industrial Engineering

Time:10:30 AM to 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.

		MARKS
Q.1	(a) State the objectives of a good plant layout.	03
	(b) State the objectives of PPC.	04
	(c) State the types of plant layouts. Explain two types of plant layouts with their advantages and limitations.	07
Q.2	(a) State the steps of PPC.	03
	(b) Compare the production systems based on their characteristics.	04
	(c) Name two measures for the goodness of a line balancing solution. You are given a line balancing problem with the following data (A, -, 6), (B, A, 3), (C, A, 4), (D, B and C, 8), (E, D, 10), (F, D, 4), (G, E and F, 8), Find a solution with minimum number of work stations for $T \leq 12$. Find the line efficiency and smoothness index.	07
	OR	
	(c) Explain the terms Loading, scheduling, dispatching, and expediting.	07
Q.3	(a) Define productivity. State the tools for improving productivity.	03
	(b) Define method study. Explain the steps in method study.	04
	(c) State the difference between a chart and a diagram? Explain the various process chart symbols used in making an FPC. Explain the use of combined activities symbol.	07
	OR	
Q.3	(a) Define work study. State the areas of application of work study in an industry.	03
	(b) Explain the factors tending to reduce productivity.	04
	(c) Prepare an OPC for the component shown in Fig. 1.	07
Q.4	(a) Explain TQM.	03
	(b) Define defect and defective. Explain assignable and chance causes of product variability.	04
	(c) Explain ideal OC curve. Why does it defer from the actual OC curve? Explain 'consumer's risk' and 'producer's risk'.	07
	OR	
Q.4	(a) Explain the purpose of a Quality Circle.	03
	(b) Explain the requirements of ISO 9000 certification.	04
	(c) Define acceptance sampling. Explain double sampling plan. When do you apply double sampling in place of single sampling?	07
Q.5	(a) Explain the importance and necessity of labour laws.	03
	(b) Define merit rating and state its objectives.	04
	(c) Explain the sources of industrial finance.	07
	OR	

- Q.5** (a) Explain the workmen's compensation Act 1923 (with latest amendments) **03**
- (b) Define job evaluation and state its objectives. **04**
- (c) Explain "process capability". Explain the characteristics of a normal distribution curve. **07**

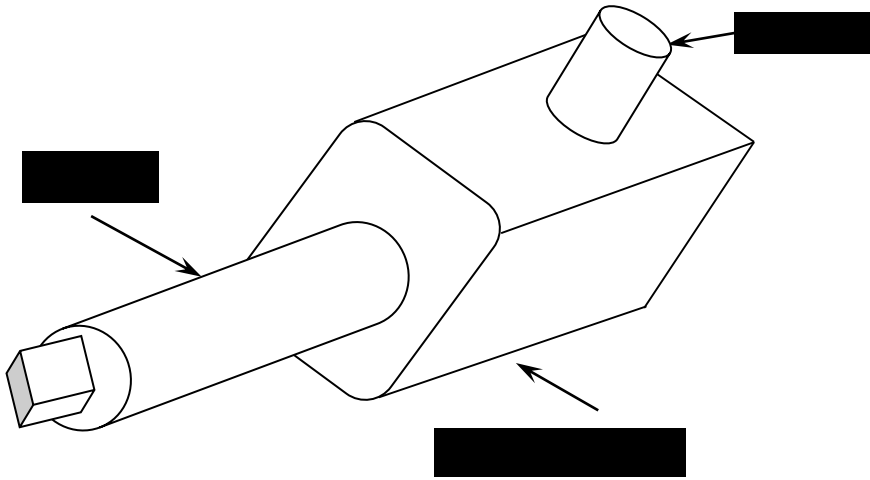


Fig.1

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