

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER– VIII (New) EXAMINATION – WINTER 2019****Subject Code: 2182504****Date: 02/12/2019****Subject Name: Facilities Planning****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
<b>Q.1</b>	(a) Define the terms: 1. Facility Planning 2. Industrial Wage 3. Depreciation	<b>03</b>
	(b) How the work in process is reduced in Chemical manufacturing plant?	<b>04</b>
	(c) Describe the various factors to be considered in selecting the location for the automobile repair shop.	<b>07</b>
<b>Q.2</b>	(a) Construct a layout of a small cotton mill.	<b>03</b>
	(b) What should you keep in mind while preparing a facility plan?	<b>04</b>
	(c) Describe the general procedure for layout design using flow chart.	<b>07</b>
	<b>OR</b>	
	(c) Explain the steps for layout design using ALDEP.	<b>07</b>
<b>Q.3</b>	(a) What are the different factors that are responsible to replace the equipment?	<b>03</b>
	(b) Determine merits and demerits of Process Layout.	<b>04</b>
	(c) What do you mean by JIT? Describe the elements and characteristics of Just-in-time.	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Define accident. State the causes of industrial accidents.	<b>03</b>
	(b) Briefly explain Minimum Wages Act, 1948.	<b>04</b>
	(c) Describe Flexible Automation System with suitable example.	<b>07</b>
<b>Q.4</b>	(a) Briefly explain Industrial Dispute Act, 1947.	<b>03</b>
	(b) Give a brief classification of depreciation.	<b>04</b>
	(c) Calculate the depreciation charges per hours for the following data, using the machine hour basis method: Cost of machine Rs. 11,000 Scrap value Rs. 1,000 Life of the machine 10 years.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) Explain planning of a facility plan.	<b>03</b>
	(b) Describe the various types of replacement situations.	<b>04</b>

- (c) A machine costing Rs. 450,000 has a scrap value of Rs. 50,000 after 10 years of service. The estimated rate of production is 12 units per hour. Using the productive unit method calculate the rate of depreciation and also depreciation per year. Assume 50 weeks per year and 48 working hours per week. **07**

- Q.5** (a) What are the causes and sources of accidents? **03**  
(b) Describe any four material handling equipments used in casting industry. **04**  
(c) Classify material handling devices. Draw and explain working of a hand truck. **07**

**OR**

- Q.5** (a) What are the various methods of depreciation? Explain any one method of calculating depreciation. **03**  
(b) Explain material handling in product layout. **04**  
(c) Draw any two types of cranes and state its specific uses. **07**

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