

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2020****Subject Code:3152607****Date:03/02/2021****Subject Name:Rubber Product & Process Engineering****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

MARKS

- Q.1** (a) Write the effect of following chemicals on human health : **03**
(i) Sulphur (ii) Peroxide (iii) Ethanol.
- (b) Write the advantages of Good Housekeeping. **04**
- (c) Define the terms: Pollution and Pollutant. Write the damages caused by the pollution on the natural functioning of biosphere. **07**
- Q.2** (a) Explain the concept of Production Management System. **03**
- (b) Describe in brief management philosophies: Just In Time And Last in first out. **04**
- (c) The annual data for ABC Ltd. is given below. **07**
- | Sr.No. | Particulars | Amount Rs. |
|--------|--|------------|
| 1 | Sales 1,00,000 units at Rs. 100/- each | |
| 2 | Raw material cost | 10,00,000 |
| 3 | Utility Cost | 1,00,000 |
| 4 | Labour Cost(Daily Wages) | 1,00,000 |
| 5 | Salaries | 10,00,000 |
| 6 | Administrative expenses | 1,00,000 |
| 7 | Rent, Insurance | 1,00,000 |
- Calculate variable cost, fixed cost, contribution and breakeven point as percent installed capacity.
- Q.3** (a) Mention the areas of Air pollution in rubber industry. **03**
- (b) Discuss fundamental Ethics for Rubber Engineers. **04**
- (c) Write a note on different forms of plant maintenance. **07**
- Q.4** (a) Write difference between Risk and Hazard. **03**
- (b) Give any Four examples of Historical incident due to hazardous material. **04**
- (c) Explain various components of Safety Program. **07**
- Q.5** (a) Write the common effects of Chemical on Human health. **03**
- (b) Write a note on Primary factors for selecting plant location. **04**
- (c) Draw the plant layout diagram for Rubberized seal manufacturing Unit. **07**
- Q.6** (a) Discuss on sprinkler system. **03**
- (b) Explain any two methods for controlling fire hazards. **04**
- (c) Explain the ways for Conserving energy in rubber Industry. **07**

- Q.7** (a) Describe the handling methods at Moulding Department. **03**
(b) Discuss benefits of motion economy. **04**
(c) Explain the important of flow chart in Rubber industry. **07**
- Q.8** (a) Define the terms: - Peak power demand, Power factor & Energy Conservation. **03**
(b) Discuss any four benefits of Proper Planning in production department. **04**
(c) List all the information needed to judge the project from financial angle. **07**

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