Seat No.: _____  Enrolment No. 

# GUJARAT TECHNOLOGICAL UNIVERSITY

**BE- SEMESTER–V (NEW) EXAMINATION – WINTER 2020**

**Subject Code:3151508** **Date:01/02/2021**

**Subject Name:Facility Layout and Material Handling systems**

**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)** | Differentiate between 'Plant location' and 'Plant Layout'. | **03** |
| | **(b)** | Explain objectives of material handling. | **04** |
| | **(c)** | Discuss how productivity can be improved with the help of FLMHS. | **07** |
| **Q.2** | **(a)** | Define 'Materials handling system'. | **03** |
| | **(b)** | Explain important objectives of facilities layout. | **04** |
| | **(c)** | Explain the main principles of material handling. | **07** |
| **Q.3** | **(a)** | Explain about 'Product layout'. | **03** |
| | **(b)** | Give the comparative advantages and disadvantages of big city and small City in plant location. | **04** |
| | **(c)** | Discuss the locational reasons for the success of ceramic tiles mfg. industry in Morbi. | **07** |
| **Q.4** | **(a)** | Under what circumstances process layout is useful? | **03** |
| | **(b)** | Discuss pitfalls in selection of site and the remedies | **04** |
| | **(c)** | State various location models and discuss any two in details. | **07** |
| **Q.5** | **(a)** | What is meant by Facilities design ? | **03** |
| | **(b)** | Discuss the characteristics of a good plant layout. | **04** |
| | **(c)** | Explain the circumstances when revising and improving the layout becomes necessary. | **07** |
| **Q.6** | **(a)** | What is work-station layout? | **03** |
| | **(b)** | How would you design the work-station layout? | **04** |
| | **(c)** | Discuss quantitative techniques for design of plant layout. | **07** |
| **Q.7** | **(a)** | What is 'Flow analysis' in material handling? | **03** |
| | **(b)** | Describe different types of Hoisting equipment. | **04** |
| | **(c)** | Discuss major guidelines for cost reduction in Materials handling | **07** |
| **Q.8** | **(a)** | Briefly Explain safety analysis in material handling. | **03** |
| | **(b)** | Name different types of conveyors. Explain any one of them in detail. | **04** |
| | **(c)** | Discuss Material handling ratio and its importance. | **07** |

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