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**B. TECH.****THEORY EXAMINATION (SEM–VIII) 2016-17  
PLANT LAYOUT & MATERIAL HANDLING****Time : 3 Hours****Max. Marks : 100****Note : Be precise in your answer. In case of numerical problem assume data wherever not provided.****SECTION – A****1. Attempt all parts of the following questions: 10 x 2 = 20**

- (a) Define flow lines.
- (b) Explain workstations.
- (c) What are the various lifting devices?
- (d) Define material handling?
- (e) Define TQM
- (f) Define waiting line.
- (g) What are the factors for selection of plant layout?
- (h) What the various systems used for material handling?
- (i) Define production.

**SECTION – B****2. Attempt any five parts of the following questions: 5 x 10 = 50**

- (a) List the information needed during the data collection phase of plant layout.
- (b) Sketch the layout you will recommend for a processing industry showing the location of important machines and departments
- (c) Explain the Rechar Muther's approach to systematic layout planning.
- (d) Describe the plant service needed for an oil refinery plant. Explain the significance of effluent treatment of such plants.
- (e) Discuss the various factor needed for design of manufacturing system.
- (f) Explain the significance of material flow in layout design with an example.
- (g) Explain in detail the Indian factory Act.
- (h) Discuss and explain Ranking and weight method for plant location.

**SECTION – C****Attempt any two parts of the following questions: 2 x 15 = 30**

- 3 Explain the major considerations for location of textile industry in Mumbai and automobile industry in Faridabad.
- 4 Describe the classification of material handling equipments and explain the characteristics of overhead crane and roller conveyors with example.
- 5 What are the factors considered while designing intelligent buildings and discuss the concept of intelligent building.