

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. Sem. - V - Examination – June- 2011****Subject code: 151503****Subject Name: Facilities Layout & Material Handling Systems****Date: 27/06/2011****Time: 10:30 am – 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.

Q.1 (a) Discuss information to be collected to prepare a layout. Take an example of a casting industry. **07**

(b) Discuss various charts used in preparing a plant layout. **07**

Q.2 (a) Discuss principle factors considered while selection of plant site. Discuss with an example of automobile plant. **07**

(b) Discuss pitfalls in selection of site, and their remedies. **07**

OR

(b) Discuss application of quantitative techniques in deciding most suitable plant layout. Discuss use of any one technique. **07**

Q.3 (a) You are required to recommend a location for a big sized shopping mall in a metro city. Describe different evaluating criteria, and a typical layout for the mall. **07**

(b) Discuss interrelations between plant layout and labour productivity. Take an example of any assembly line. **07**

OR

Q.3 (a) Discuss most suitable type of layout for manufacturing of i) Aircraft and ii) Cement. **07**

(b) Discuss labour productivity in light of a mechanization of handling activity decision. **07**

Q.4 (a) Discuss unit load concept of material handling. Discuss in detail design of a crate of soft drink. **07**

(b) Discuss basic data required to analyse a Material handling problem. Take an example of a foundry. **07**

OR

Q.4 (a) Discuss Basic types of material handling equipments and their characteristic as classified by each type. **07**

(b) Discuss Selection of material handling equipment for a pharmaceutical industry. **07**

Q.5 (a) Discuss gravity principle of material handling, and the equipment suitable for handling such materials/goods. **07**

(b) Discuss Capacity calculation for belt conveyor, as in material handling equipment design. **07**

OR

Q.5 (a) Discuss use of cubic space principle of material handling, Citing application in a paint manufacturing industry. **07**

(b) Discuss importance of a good layout for success of material handling system. Take an example of any industry. **07**
