

Code No: 09A80302

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year II Semester Examinations, July - 2014

PLANT LAYOUT AND MATERIAL HANDLING

(Mechanical Engineering)

Time: 3 Hours

Max. Marks: 75

Answer any Five Questions  
All Questions Carry Equal Marks

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- 1.a) What are the objectives of plant layout?  
b) Explain the factors influencing plant layout.  
c) What are the symptoms of a poor plant layout?
- 2.a) What do you mean by the term plant location? Explain clearly.  
b) What are the various factors which affect plant location?  
c) What are the factors to be considered to obtain good working conditions in a Plant?
- 3.a) Discuss about container used in material handling.  
b) Explain briefly with diagram about the working of gantry crane.  
c) Discuss different ways of improving material handling systems from time to time.
- 4.a) Describe the principle followed for material handling activities.  
b) In which situation conveyors are preferred? Why?  
c) Explain the use of break-even analysis for plant location with a suitable example.
- 5.a) Compare process layout with product layout with examples.  
b) Describe with neat sketches about the various flow patterns used in the industries.
- 6.a) What do you understand by line balancing?  
b) What are the symptoms of an unbalanced line?
7. Why effective plant maintenance is important? Does this have any connection with organization placement of the maintenance department? If so, what and why?
8. What are the factors to be considered in choosing the location for the following industries?  
a) Aluminium industry.  
b) Thermal power plant.  
c) Large furniture (domestic and office) manufacturing unit.