

Register No: .....

**B.E DEGREE EXAMINATIONS: APRIL /MAY 2011**

Sixth Semester

**MECHATRONICS ENGINEERING**

U07MHE02: Plant Layout and Material Handling

**Time: Three Hours**

**Maximum Marks: 100**

**Answer ALL the Questions:-**

**PART A (10 x 1 = 10 Marks)**

1. Which has better influence in the layout?  
a) Shape                      b) Size                      c) Both a & b                      d) None
2. Man power requirement are made by  
a) By company gate hiring    b) Outsourcing    c) Consultancy    d) All the above
3. Travel chart is ..... Technique.  
a) Analytical                      b) Experimental                      c) Sequential                      d) Both a & b
4. A product passing in an orderly sequence is for  
a) Line Balancing    b) Square Balancing    c) Assembly Line Balancing    d) Both a & b
5. Which lighting is provided for specific operation?  
a) General lighting    b) Supplementary lighting    c) Both a & b    d) None
6. Shredded paper is not recommended for.....  
a) Containers    b) Shipping    c) Machinery    d) Light materials
7. The material handling mainly used to reduce.....  
a) Overhead cost    b) Material cost    c) Labour cost    d) Safety
8. The path of material flow in conveyor is.....  
a) Fixed    b) Random    c) Intermediate    d) Both a & c
9. Safety in industry helps to.....  
a) Increase production    b) Reduce production cost    c) Reduce damage    d) All the above
10. The type of survey includes.....  
a) Specific survey    b) General survey    c) Both a & b    d) None of the above

**PART B (10 x 2 = 20 Marks)**

11. List out the advantages and disadvantages of urban location of a factory?
12. Give the necessity of manpower in factory/
13. List out the types of layout
14. Name the steps involved in of production process line balancing

15. State the requirements of a good factory building
16. Is lighting and ventilation necessary for factory? Shortly explain
17. What is meant by material handling? Give its importance.
18. How to reduce material handling cost by plant layout?
19. Mention the steps involved in material handling analysis?
20. Shortly enumerate the preventive measure used in factory.

**PART C (5 x 14 = 70 Marks)**

21. a) What are the factors considered for general location for a factory? Explain in detail.  
(OR)
  - b) (i) Explain in detail about plant capacity (7)
  - (ii) What are the methods to obtain flexibility? (7)
  
22. a) List out the tools and techniques for layout? Explain in detail.  
(OR)
  - b) (i) Briefly enumerates the assembly line balancing in detail? (7)
  - (ii) Write the various steps of layout planning. (7)
  
23. a) (i) State the different types of factory building. Explain the factors determining it. (8)  
(ii) Explain how maintenance is important for factory? (6)  
(OR)
  - b) Explain various methods of packaging and write its importance. (7+7)
  
24. a) Explain the basic principles of material handling system in detail.  
(OR)
  - b) (i) What are the advantages of material handling system? (7)
  - (ii) Discuss any case study regarding material handling system. (7)
  
25. a) Explain the different factors involved in material handling analysis.  
(OR)
  - b) State the need for material handling survey? Explain in detail. (7+7)

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