Register Number……..

M.E DEGREE EXAMINATIONS: DECEMBER 2009

First Semester

INDUSTRIAL ENGINEERING

IEE503: Facilities Location and Design

Time: Three hours **Maximum Marks: 100**

Answer ALL questions:

PART A (10 x 2 = 20 Marks)

1. What is the role of plant location in the design of a production system?
2. List various costs which decide the location economy.
3. List any two material handling decisions that will affect the layout.
4. What are the advantages of computerized layout algorithms?
5. Define Group Technology.
6. What are the methods available for solving line-balancing problems?
7. How material handling types are distinguished from one another?
8. What are the functions of container?
9. List any two missions of a warehouse.
10 Mention any two receiving principles.

PART B (5 x 16 = 80 Marks)

11. (a) Explain the factors governing the choice of site for a manufacturing plant in a city or in a suburban part of a country.

(OR)

(b) Find out the minimum location of a new machine tool in a maintenance department. Suppose there are five existing machines that a material handling relationship with the new machine. The existing machines are located at the points p1=(1,1), p2=(5,2), p3=(2,8), p4=(4,4) and p5=(8,6). The cost per unit distance travelled is the same between the new machine and each existing machine. The number of trip between the new machine and existing machine are 5, 6, 2, 4 and 8 respectively.

12. (a) Explain about Apple's plant layout procedure.

(OR)

(b) Explain about ALDEP procedure.

13. (a) Describe the Heuristic method of line balancing.

(OR)

(b)What is PFA? Explain the procedure in PFA.

14. (a) Briefly describe the following types of Material Handling equipment.

(i) Conveyors

(ii) Industrial vehicles.

(OR)

(b) What are the factors to be considered while selecting Material Handling equipment?

15. (a) Describe about the functions in the warehouse.

(OR)

(b)What are the objectives of a warehouse layout? What are the factors to be considered while developing warehouse layout?

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