

FACULTY OF ENGINEERING

B. E. 4/4 (Mech/Prod.) I-Semester (Old) Examination, July 2010

Subject : **Production and Operations Management**

Time : 3 Hours

Max. Marks: 75

Note: Answer all questions from Part-A. Answer any Five questions from Part-B.

Part – A (10 x 2.5 = 25 Marks)

1. What are the various functions of management?
2. Explain the salient features of line and staff organization.
3. What is simple median model?
4. Differentiate between process layout and product layout.
5. What is work sampling?
6. List various work measurement techniques.
7. Classify various earth moving machinery.
8. Distinguish between Belt and Screw conveyor.
9. What is Fishbone diagram?
10. Distinguish between PERT and CPM.

Part – B (50 Marks)

- 11.a) Briefly discuss the contribution of Henry Fayol to scientific management. 5
- b) What are the various components of FMS? Explain its advantages and limitations. 5
- 12.a) Briefly discuss manufacturing cellular layout. 5
- b) Discuss loading assignment algorithm. 5
- 13.a) Briefly explain various work measurement techniques. 5
- b) A paper company produces paper for the newspaper industry. As a final step in the process, the paper passes through a machine that measures various quality characteristics. When the process is in control, it averages 20 defects per roll. Set up a control chart for the number of defects per roll. Use two-sigma control. 5
- 14.a) Describe the factors to be considered while selecting material handling equipment. 5
- b) Classify various types of Hoisting equipment. Mention atleast two applications of each. 5

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- 15.a) Discuss the principles of pneumatic and hydraulic conveying systems. 5
- b) What are the factors to be considered for selecting automatic handling equipment? 5
- 16.a) Discuss the Taguchi method of quality control. 5
- b) Explain value added manufacturing with examples. 5
17. Write short notes on any **two** of the following : 10
- a) Factor rating
 - b) Bucket conveyor systems
 - c) Japanese Manufacturing Techniques
