M.B.A. DEGREE EXAMINATION, November/December 2010

Second Semester

BA 9221 — OPERATIONS MANAGEMENT

(Regulation 2009)

(Use of normal probabilities permitted)

Time : Three hours

Maximum :100 Marks

Answer ALL Questions

PART A — $(10 \times 2 = 20 \text{ Marks})$

- 1.What is an operations system?
- 2. What are the five basic elements of operational excellence?
- 3. What do you mean by regression and correlation analysis?
- 4. Write down the functions of master production schedule.
- 5. What are the attributes to characterize a project organization?
- 6. Why is break even analysis done in facility location?
- 7. Define the term 'Backordering'.
- 8. What are the steps involved in value analysis?
- 9. Write about cyclegraph and chronocyclegraph.
- 10. What are the factors that influence product design?

PART B — (5 × 16 = 80 Marks)

11. (a) (i) What are the various functions of operations? How are they linked to other parts of an organization? (Marks 10)

(ii) Discuss the design issues under which the operations system function. (Marks 6)

Or

(b) (i) Compare and discuss the cost and flexibility tradeoff in operations strategy. (Marks 6)

(ii) What are the steps involved in strategic-formulation process? How does the manufacturing

technology provide unique advantages to organization in providing products and services to customers? (Marks 10)

12. (a) (i) Write about the aggregate planning methods, advantages and their limitations. (Marks 8)(ii) What are the factors influencing effective capacity and what are all the factors favoring overcapacity and under capacity? Discuss. (Marks 8)

Or

(b) (i) Alpha company has the following sales pattern compute the sales forecast for the year 10. (Marks 10)

Year: 123456789

Sales (in lakhs) ; 6 8 11 23 29 34 40 45 56

(ii) Explain the demand patterns in forecasting. (Marks 6)

13. (a) (i) A component is to be processed on two machines lathe and milling machine. The sequence of

operation is first turning and then milling.

Machine Times :

Turning : 12 min

Milling : 20 min

(1) Estimate the number of machines required to machine 2500 components per week if available machine hours per week are 48

(2) What are the steps that you propose to reduce number of machines? (Marks 10)

(ii) Explain the production aspects of product design. (Marks 6)

Or

(b) (i) Give reasons for excess work content and techniques to reduce it with examples. (Marks 8)

(ii) What is rating? What are the factors affecting performance rating of a worker and explain various methods of performance rating. (Marks 8)

14. (a) (i) Distinguish between P and Q systems of inventory and what are the cases that exist in each of the systems. (Marks 8)

(ii) Write about seven wastes in production and what are the basic elements and benefits of JIT. (Marks 8) Or

(b) (i) What are the methods used for accounting the issues of stores and what are the main reasons for accumulation of obsolete, surplus and scrap items how it can be avoided. (Marks 8)

(ii) What are the levels of management and MIS and what are the various output reports and limitations of MIS. (Marks 8)

15. (a) (i) Compare PERT and CPM and give some project management software. (Marks 6)

(ii) Explain the material flow system and patterns in facility layout and give their characteristics. (Marks

10)

Or

(b) (i) There are five existing facilities which are to be served by a single new facility. The details of the existing facilities are :

Existing facility (i) : 1 2 3 4 5

Coordinates (a b) 5,10 20,5 15,20 30,25 25,5

Number of trips of Loads/Year (W) 100 300 200 300 100

Find the optimum location of the new facility based on gravity location concept. (Marks 6)

(ii) What role does the globalization play in the facilities location problem and give the application areas and inputs of line of balance. (Marks 10)

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