Code: 13A03710 **R13**

B.Tech IV Year I Semester (R13) Supplementary Examinations June 2017

PRODUCTION & OPERATIONS MANAGEMENT

(Mechanical Engineering)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) Define production.
(b) What is aggregate planning?
(c) Give examples of short term planning.
(d) Name two forecasting techniques.
(e) What is product layout?
(f) What is lean management?
(g) What is Kanban system?
(h) Write the objectives of MRP?
(i) List the factors affecting scheduling.
(j) Describe the costs associated with inventory.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 Is the production & operations management function is getting to be increasingly people centric? If so, what may be the reasons?

OR

3 Describe aggregate planning with suitable diagrams and explain pure strategies of aggregate planning.

UNIT – II

4 Explain various forecasting techniques.

OR

5 Explain the factors that influence sales forecasting.

UNIT – III

6 What is plant layout? Discuss objectives and advantages of good layout.

OR

7 Write briefly about various computerized techniques used in designing plant layout.

UNIT – IV

8 Describe the lean manufacturing and philosophy to create a lean enterprise.

OR

9 What is the importance of total quality management? And state Deming's 14 principles on TQM.

UNIT – V

10 What are the objectives of scheduling? Explain briefly about job shop scheduling.

OR

11 A manufacturer has to supply 12,000 units of a product per year to his customer. The demand is fixed and known and the shortage cost is assumed to be infinite. The inventory holding cost is Rs. 0.20 per unit per month and the setup cost per run is Rs. 350. Determine: (i) The optimum run size. (ii) Optimum scheduling period. (iii) Minimum total variable costs per year.

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