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Code No. : 41413

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (Mech. Engg.) IV Year I-Semester Main Examinations, December-2017

Production and Operations Management

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

1. Identify factors affecting plant location.
2. What is Break Even analysis?
3. Explain Delphi technique.
4. What is meant by forecasting?
5. List the objectives of MRP.
6. Explain master production schedule.
7. What is the importance of inventory control?
8. List out assumptions in EOQ.
9. What do you mean by crashing of network?
10. Explain Fulkerson's rule in constructing network.

Part-B (5 × 10 = 50 Marks)

11. a) Explain the steps involved in time study. [5]
 b) Distinguish between job shop and Batch production systems with examples. [5]
12. a) Explain least square method of forecasting. [4]
 b) The demand for a product during last 10 years is given below. Estimate the demand for the next two years by the method of regression. [6]

Year	1	2	3	4	5	6	7	8	9	10
Units	124	135	145	150	167	157	161	170	187	168

13. a) List the principle inputs & outputs of a material requirement planning system. [5]
 b) Explain in detail about various costs in aggregate planning. [5]
14. a) What is ABC analysis? Explain it with an example. [4]
 b) The annual demand for an automobile component is 24,000 units. The carrying cost is Rs. 0.4/unit/year, the ordering cost is Rs. 20 per order & the shortage cost is Rs.10/unit/year. Find the optimal values of the following: [6]
 - i) EOQ
 - ii) Maximum shortage quantity
 - iii) Maximum inventory
 - iv) Cycle time.