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## Question Paper Code : X 85172

M.B.A. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2020

Second Semester
BA 5206 - OPERATIONS MANAGEMENT
(Regulations 2017)
Time : Three Hours
Maximum : 100 Marks

## Answer ALL questions

PART - A

1. Outline the scope of production management.
2. What is a supply chain?
3. Define the meaning of demand forecasting.
4. During what circumstances do you decide on multiplant location ?
5. What are the objectives of product design ?
6. Define method study.
7. How will you calculate the standard time to complete a job ?
8. Define JIT.
9. What are the time estimates used in PERT ?
10. What are the assumptions in flow shop scheduling ?
PART - B
11. a) Explain in detail how the subject of production management has evolved over time.
(OR)
b) Identify the three key supply chain phases and explain the significance of each one.

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12. a) Explain various terms associated with MRP.
(OR)
b) Explain quantitative methods of demand forecasting.
13. a) Explain the procedure in conducting production study.
(OR)
b) List out and explain various stages in new product development process.
14. a) Explain various types of inventory cost.
(OR)
b) Differentiate between centralization and decentralization purchasing.
15. a) Discuss the guidelines for constructing a project network.
(OR)
b) Develop a mathematical model for single - machine scheduling problem to minimize mean tardiness.
PART - C
16. a) The mean observed time and rating factor for five elements of a job are given below. Find out the allowed time where fatigue allowance, personal allowance and contingency allowance are $5 \%, 10 \%$ and $15 \%$ of basic time respectively.

| Element | Mean observed time in <br> Minutes | Rating factor |
| :---: | :---: | :---: |
| 1 | 0.3 | 120 |
| 2 | 0.6 | 120 |
| 3 | 2.2 | 80 |
| 4 | 1.5 | 110 |
| 5 | 1.4 | 90 |

(OR)
b) There are five jobs to be done by five men. Each man needs to do only one job and each job is independent of the other (they are not sequenced). Suggest an appropriate scheduling algorithm and draw it as a flow diagram to assign the jobs to the men.

