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SEVENTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGR EXAMINATION, NOVEMBER 2015

ME/PTME 09 702/AM 09 702-OPERATIONS MANAGEMENT

Time : Three Hours

Maximum : 70 Marks

Name

Reg.

Part A

Answer all questions.

- 1. Why study Operation Management ?
- 2. What is the difference between Production Management and Operation Management?
- 3. Define Throughput Ratio.
- 4. How, precisely does project scheduling differ from the scheduling of ongoing operations ?
- 5. What is the management significance of finding the critical path through a network ?

 $(5 \times 2 = 10 \text{ marks})$

Part B

Answer any four questions.

- 6. Why is interfunctional co-operation important for new-product design ? What are the symptoms of a possible lack of interfunctional co-operation ?
- 7. Identify some of the current trends in operations that you think are of critical importance and write short note about any one.
- 8. The project process is typically used for skycraper construction. Does this lead to higher costs ? Explain.
- 9. Why are facilities decisions often made by top management? Describe the duties of top management.
- 10. Describe a forward pass and a backward pass need for a project schedule.
- 11. Contrast and compare CPM and PERT as a project management techniques.

 $(4 \times 5 = 20 \text{ marks})$

Part C

Answer all questions.

- 12. Describe the nature of operations management in the following organizations :
 - (a) A college library.
 - (b) A hotel.

- 13. Explain, how can the modular design concept control production variety and at the same time allow product variety.
- Describe the changes required if the firm moving from a batch process to an assembly line process in terms of finance, marketing, human resources, accounting and information systems. 14.

Or

- With neat sketch explain the fixed layout of any one manufacturing industry. 15.
- With an example, explain how is the Gantt chart used as a scheduling tool. 16.

Or

- 17. In a hardware warehouse, the independent demand for a commonly used bolt is 500 units per month. The ordering cost is Rs. 300 per order placed. The carrying cost is 25 percent per year and each unit cost Rs. 5:
 - (a) What lot size should this product have?
 - (b) How often should this product be purchased?
 - (c) A quality team has found a way to reduce ordering cost to Rs. 50. How will that change the lot size and the frequency of purchasing for this product?
 - 18. A PERT network drawing and optimistic, most likely and pessimistic activity times listed under each node are given below for a secret military project :



- (a) Determine expected time for each activity.
- (b) Find the critical path.
- (c) Find expected completion time.

Or

19. Explain the preventive maintenance techniques available in an oil industry with neat block diagram.