

Roll No.

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B.E/B.Tech(FULL-TIME) DEGREE END SEMESTER EXAMINATIONS ,April/ May 2011

INDUSTRIAL ENGINEERING

V Semester

IE 371 – Production Planning and Control

(Regulation 2004)

Answer ALL Questions

Time: 3 Hours

Max.Marks:100

Part-A (10 X 2 = 20 Marks)

1. Write the objective of operations management.
2. Write any two differences between manufacturing and service sector.
3. Define forecasting.
4. List the different forecasting methods for the existing products.
5. What is aggregate production planning?
6. Write any two differences between MRP and MRP-II
7. What do you mean by capacity planning?
8. What are the different types of capacity?
9. Define line balancing.
10. State objective of PPC

PART – B (5 x 16 = 80 Marks)

11. Explain the salient features of Just in time production system.
- 12 a) Describe various phases in product life cycle.

OR

- 12 b) Explain the factor affecting process selection.
- 13a. Explain various Qualitative forecasting methodologies.

OR

- 13 b) .The following data are for computer sales in units at an electronics store over the past nine weeks.

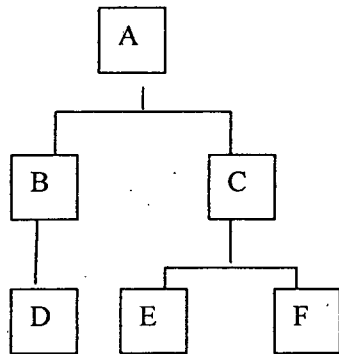
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|-------|----|----|----|----|----|----|----|----|----|
| Week | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Sales | 46 | 49 | 43 | 50 | 53 | 58 | 61 | 63 | 69 |

Use simple exponential smoothing with $\alpha = 0.3$ to forecast sales. Assume that the average of the time series was 48 units just before week 1

14 a) Explain about any four MRP lot sizing procedures.

OR

14b) Given the following product structure, BOM and Inventory status, develop MRP tables for all items



Master Production

Bill of Materials:

| Item | No.Reqd | Initial stock | LT |
|------|---------|---------------|----|
| A | 1 | 0 | 2 |
| B | 2 | 20 | 3 |
| C | 1 | 20 | 2 |
| D | 2 | 40 | 3 |
| E | 1 | 90 | 4 |
| F | 1 | 20 | 2 |

Schedule

| Week | 1 | 2 | 3 | 4 | 5 | 6 |
|--------------------|-----|-----|----|----|-----|-----|
| Scheduled Quantity | 125 | 125 | 81 | 75 | 115 | 175 |

15 a) Explain in detail about the systematic capacity planning decisions.

OR

15 b) Describe capacity requirements planning with a flow chart.