29744

Name : .....

Reg. No: .....

SEVENTH SEMESTER B.TECH DEGREE EXAMINATION, OCTOBER 2012

ME 09 702 – OPERATIONS MANAGEMENT

Time : Three Hours **Maximum : 70 Marks**

PART – A

1. What is productivity?
2. What is MRP?
3. What is BIN card.
4. What is crashing of network.
5. Explain master production schedule.

(5 x 2 = 10 Marks)

PART – B

6. What are the principles of good product design?
7. What are the qualitative methods in forecasting?
8. Explain Johnsons rule for sequencing.
9. What are the basic inputs for MRP.
10. What are the objectives of materials management.
11. How can we find out the optimum period for replacement.

(4 x 5 = 20 Marks)

PART – C

12. ABC Ltd. Has started the production of invertors. The demand for different weeks of March and April of the company are given below. Assume the initial forecast for the first week of March as 6000 and corresponding initial trend as zero. Assume α =0.1 and β = 0.2. Represent the trend adjusted exponential smoothing forecast for March and April. Also find MAD, MSE, MAPE and tracking signal.

Month	March				April			
Week	1	2	3	4	1	2	3	4
Demand	6500	6000	5500	6500	6500	6250	7000	7100

(Or)

13. Write short note on:
    (i) Standardization
    (ii) Simplification
    (iii) Product design

14. Briefly explain computerized layout planning.

(Or)

15. Explain (i) Aggregate production planning
    (ii) Assembly line balancing.

16. Briefly explain Deterministic and probabilistic inventory models.

(Or)

17. We have five jobs each of which must go through three machines A, B and C in the order A, B, C. Processing time in hours are given. Determine a sequence for the five jobs that will minimize the total elapsed time. Find also the idle time for machines A, B and C.

Job	Processing time		
i	Ai	Bi	Ci
1	16	10	8
2	20	12	18
3	12	4	16
4	14	6	12
5	22	8	10

18. The precedence relationship with Node numbers of a maintenance job are given as follows. Draw the arrow diagram and show the critical path. Indicate the slack times for jobs (3, 5) and (7, 8).

Job	a	b	c	d	e	f	g	h	k	L
Node Number	1-2	2-3	2-4	3-5	3-6	4-6	4-7	5-8	6-8	7-8
Duration (Days)	2	3	4	5	10	6	3	8	7	3

(Or)

19. Explain preventive maintenance and break down maintenance in detail.

(4 x 10 = 40 Marks)

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