

II Semester M.B.A. (Day) Examination, July/Aug. 2006
(Updated Scheme)
MANAGEMENT

2.5 – Production and Operations Management

Time: 3 Hours

Max. Marks: 75

SECTION – A

Answer any six questions.

(6×2=12)

1. a) Distinguish between Inspection, Quality Control and Quality Assurance.
- b) Write the different types of recording in Method study.
- c) What is the difference between Observed time, Normal time and Standard time ?
- d) What is Value Engg. and how does it differ from other cost reduction techniques ?
- e) Explain the concept Cp and Cpk.
- f) What is stratification ? Why it is required ?
- g) What is MRP ?
- h) What is Bench marking ?
- i) Explain Consumer's risk and Producer's risk.

SECTION – B

Answer any four questions.

(4×5=20)

2. Explain the concept Muda, Muri and Mura.
3. a) What are the different types of Inventory encountered in industry and who is responsible for each ?
- b) An item is required at the rate of 4000 Nos/ month. The item costs Rs. 12 each and cost of placing each order costs Rs. 50; The inventory carrying cost is 15% of unit cost.
Find total inventory cost and if he gives 8% discount on price if we place an order in the range of 10000 to 15000 nos/ order, is it worth accepting.

P.T.O.

4. a) What are the different types of pillars in TPM ?

b) Calculate OEE for the following:

A Machine has been planned to work for 3 shifts of 8 hours each. Due to problems w.r.t. power etc it was idle for 129 minutes. The job running on the M/C was supposed to take 3 mts/piece. The actual pieces produced were 403 out of which 17 pieces are not accepted.

5. Explain the concept of work measurement and what are the various types of work measurement available ?

Calculate the standard time/piece for the following jobs.

Observed time for Cycle	Mts	Mts	Mts
	Manual Time	M/C Time	Total Time/piece
1	2.2	0.9	3.1 mts
2	2.7	0.9	3.6 mts
3	2.4	0.9	3.3 mts
4	2.5	0.9	3.4 mts
5	2.6	0.9	3.5 mts

Av performance rating is 90%. The allowances is 11% of normal time.

6. Explain the concept of lean manufacturing.

7. What are the seven tools of Q.C. ? and explain the concept of cause and effect diagram with an example.

SECTION - C

Answer any three questions.

(3×10=)

8. a) What are the criteria for designing a product like scooty predominantly meant for ladies ?

b) What are the criteria for locating a defence unit to produce army tanks ?

9. a) What are the different types of control charts used in quality control ? What are the objects of Q.C. control charts ?

b) Draw a control chart for the following

Sample No.	1	2	3	4	5	6
Sample size	100	150	200	250	300	150
No. of Defectives	5	7	8	4	9	6

10. a) What is Line Balancing ? How do you calculate line efficiency ?

b) Balance the following which are done with 9 operations, in 4 stations are

Operation No.	Precedence	Time in Minutes
1	-	3 Mts
2	1	2 Mts
3	2	6 Mts
4	3	4 Mts
5	2	5 Mts
6	5	6 Mts
7	6	4 Mts
8	4	4 Mts
9	7,8	3 Mts

Calculate the line efficiency.

11. a) What is meant by capacity planning ?

b) A metal processing organisation wishes to install automatic molders to produce 250000 castings/year. The molding operation takes 1.5 minutes/casting. The output has 3% defectives.

How many molders will be required if each one of them is available for 2000 Hrs. per year ?

12 Explain:

a) J. I. T

b) Dell's Inventory system

c) Pull system

SECTION - D
(Compulsory)

(1×13=13)

13. A company which was selling 200 crores 10 years back was maintaining 7 months stock of raw materials and components which is approximately 40% of sales.

Today they are producing 1000 Rs. crores and 40% accounts to Rs. 400 crores as raw material and components.

The company is able to manage only 10 days stock of RMC:

- a) How do you feel that this could be possible ?
 - b) What are the methods he would have used to achieve the same.
 - c) Can you suggest a road map to achieve this manufacturing excellence.
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