Production and operation management

6th sem exam-2006

Question 1

Answer all questions: (2×10)

(a)

What are the symbols used in an operation process chart? What do they represent?

(b)

What is a therblig?

(c)

How do increase in variable and fixed costs affect Brea Even Point?

(d)

What is a dummy activity in PERT network? Why is it used? How is it representation in a diagram?

(e)

What is product reliability? How is it different from quality?

(f)

What is the use of value engineering?

(g)

What type of layout is used forship building and why?

(h)

What is a line of balance?

(i)

Which type of organization is eligible for ISO-9001 certificate? Give an example.

(j)

List down the costs which are considered for inventory carrying cost.

Question 2

(a)

Differentiate between goods and services. (5)

(b)

Write short note on product life cycle. (5)

Question 3

(a)

What is FMS? How is it different from CIM? (4)

(b)

What is work sampling? How is it different from stop watch time study? (6)

Question 4

(a)

What is plant layout? Differentiate between process layout and product layout. (1+5)

(b)

Explain rank order clustering method for machine component assignment. (4)

Question 5

(a)

How are the moving average and exponential smoothing methods of forecasting related? (5)

(b)

Differentiate between MRP and CRP. (5)

Question 6

A manufacturer purchases item in lots of 1000 units which is a requirement for one quarter. The cost per unit is Rs. 200/-.the ordering cost is Rs. 100/- per order. The quarterly inventory carrying cost is 5%. Find out the following:

(a) EOQ (4)

(b) total annual cost (3)

(c) saving due to EOQ purchase (3)

Question 7

(a)

Differentiate between PERT and CPM (4)

(b)

Write short notes on any two of the following: (3+3)

(i) JIT

(ii) Quality Circle

(iii) Supply chain management.

Question 8

Find the sequence that minimize the total time required in performing the following five jobs on three machines in order ABC. The processing times in given in the following table. (10)

Machine	Job 1	Job 2	Job 3	Job 4	Job 5
A	8	2	6	3	6
B	4	5	4	3	2
C	7	6	5	10	8