

R17

Code No: 743AA
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MBA III Semester Examinations, December - 2018
PRODUCTION AND OPERATIONS MANAGEMENT
Time: 3hours
Max.Marks:75
Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A
5 × 5 Marks = 25

- 1.a) Conceptualizing production system as a transformation process, explain atleast two each of manufacturing and services with inputs and outputs. [5]
- b) What are the attributes of a product? [5]
- c) What do you understand by cellular layout? What are its merits? [5]
- d) What are the disadvantages of Gantt chart as a scheduling tool? [5]
- e) What do you understand by selective inventory control techniques? Explain atleast one of them. [5]

PART - B
5 × 10 Marks = 50

- 2.a) "Production function, though is a vital function in an organization, it remains essentially a behind the scene non glamorous function". Comment on the statement.
 - b) What are generic strategies? [5+5]
- OR**
- 3.a) What is system concept of production/operation?
 - b) What is total productivity? What is partial productivity? Explain the difference. [5+5]
- 4.a) What is ergonomics? What is its relevance to production management?
 - b) What is value engineering? How does it differ from cost reduction? [5+5]
- OR**
- 5.a) What is standardization? What are its advantages in manufacturing?
 - b) What is process planning design? [5+5]
6. XYZ company is considering an additional facility. The company is heavily dependent on water transportation. Therefore it has narrowed its choice of location to three port facilities in Mumbai, Karwar and Machilipatnam. On the basis of the following data, which location is preferable?

Relevant factors	Mumbai	Karwar	Machilipatnam
Variable cost per unit	Rs. 18	Rs. 20	Rs. 19.50
Fixed cost per year	Rs. 15 lakhs	Rs. 30 lakhs	Rs. 40 lakhs
Price per unit	Rs. 300	Rs. 300	Rs. 300
Volume(unit/year)	3 lakhs	2.5 lakhs	3.25 lakhs

[10]

OR

- 7.a) Bring out the reasons with examples for layout revision.
b) What are the factors influencing plant layout? [5+5]
8. Consider the following three machines and five jobs flow shop problem. Check if Johnson's rule can be extended to this problem. If so, what is the optimal schedule and the corresponding makes pan? [10]

Job	Machine 1	Machine 2	Machine 3
1	11	10	12
2	13	8	20
3	15	6	15
4	12	7	19
5	20	9	7

OR

- 9.a) What are the set of priority rules for scheduling 'm' jobs through single machine? Explain briefly each of them.
b) What is quality control? What are its objectives and benefits? [5+5]
- 10.a) For a given item of constant demand rate, the yearly demand is 6025 units. The price of the item per unit is Rs.60. The ordering cost is Rs. 300 per order. What should be the optimum inventory policy?
b) Explain ABC analysis technique of inventory management? [5+5]
- OR
- 11.a) A firm has a demand distribution of demand during a constant lead time with a standard deviation of 400 units. The firm wants to provide 95 percent service.
i) What is the safety stock that needs to be provided?
ii) If the demand during lead time averages 1500 units, what is the appropriate order level?
b) What are the functions of storekeeping? [6+4]

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