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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MBA III Semester Examinations, March/April - 2023
PRODUCTION AND OPERATIONS MANAGEMENT

Time: 3 Hours   Max.Marks:75

Note: i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART - A

(25 Marks)

1.a) Write Strategic role of Operations Management.   [5]
  b) What are the needs of facility location decision? Brief.   [5]
  c) Write break -even analysis role in POM.   [5]
  d) Define scheduling. Point out the objectives of scheduling.   [5]
  e) Illustrate the categories of scrap.   [5]

PART - B

(50 Marks)

2.a) Explain concept of production and discuss five generic competitive strategies in detail.
  b) Discuss the Role and Responsibilities of Production Managers in an Automobile Manufacturing Organization.   [5+5]

OR

3.a) Discuss about the product and process design strategies.
  b) What do you understand by manufacturing process technology? Explain the role of CAD in manufacturing.   [5+5]

4.a) Explain the role of ergonomics product design and steps in process planning.
  b) Discuss the steps in location selection.   [5+5]

OR

5.a) Explain the concept of new product development.
  b) Discuss the probable errors in plant selection decision.   [5+5]

6.a) From the following data, you are required to calculate: (i) The amount of fixed expenses. (ii) The number of units to break -even. (iii) The number of units to earn a profit of Rs. 40,000. The selling price per unit can be assumed at Rs. 100. The company sold in two successive periods 7,000 units and 9,000 units and has incurred a loss of Rs. 10,000 and earned Rs. 10,000 as profit respectively.
  b) A company is making a loss of Rs. 40,000 and relevant information is as follows: Sales Rs. 1,20,000; Variable Costs Rs. 60,000; Fixed costs Rs. 1,00,000. Loss can be made good either by increasing the sales price or by increasing sales volume. What are Break even sales if (i) Present sales level is maintained and the selling price is increased. (ii) If present selling price is maintained and the sales volume is increased. What would be sales if a profit of Rs. 1,00,000 is required?   [5+5]

OR

7.a) Explain the classifications of layout.
 b) Explain the model for multi facility location problem. [5+5]

8.a) Explain Johnson's algorithm in detail.
 b) Describe various industrial engineering techniques in operations. [5+5]

OR

9. Consider a flow shop that has only two processors. A job is completed first on processor1 and then on processor 2. The data for 10 jobs are as follows.

Job	1	2	3	4	5	6	7	8	9	10
Processer 1	2	7	9	0	3	10	1	5	6	8
Processer 2	6	8	4	10	9	7	5	1	2	3
Due date	25	19	30	25	16	55	60	32	45	39

a) Determine the schedule that minimizes the maximum flow time.
b) What is the maximum flow time for your schedule?
c) How many jobs are tardy in your schedule? [10]

10.a) "By combining ABC with XYZ approaches, stock management policies, systems and procedures can be better tailored". Justify.
 b) Discuss the functions of stores. Point out the parameters of purchasing. [5+5]

OR

11.a) Discuss ABC analysis in detail and brief on components of integrated material management.
 b) Write a note on purchase management and stores management. [5+5]

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