R17

Code No: 743AA

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MBA III Semester Examinations, April/May-2019
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. Answer the following:
   a) Strategic role of Operations Management [5]
   b) Benefits of standardization to quality [5]
   c) Break-even chart [5]
   d) Cause and effect diagram [5]
   e) Categories of scrap [5]

PART - B **5 × 10 Marks = 50**

2. Explain concept of production and discuss five generic competitive strategies in detail. [10]

OR

3. Define Job Shop. When does an operations manager prefer Job Shop production process? [10]

4. Explain the role of ergonomics product design and steps in process planning. [10]

OR

5. What is Value Analysis? Explain the objectives and steps in conducting Value Analysis. [10]

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. Discuss the objectives and principles of Plant Layout and brief on layout design procedure. [10]

8. Explain Johnson's algorithm in detail. [10]

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. What is VED Analysis? Explain the importance of VED analysis in controlling the inventory. [10]

OR

11. Discuss ABC analysis in detail and brief on components of integrated material management. [10]

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