

Code No: 763AA

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MBA III Semester Examinations, July/August - 2021
PRODUCTION AND OPERATIONS MANAGEMENT

Time: 3 hours**Max.Marks:75**

Answer any five questions
All questions carry equal marks

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- 1.a) What are the key elements to be considered in product design?
- b) What are the characteristics of flow production? Illustrate your answer with appropriate example. [7+8]

2. What are generic strategies? What is their impact on production management function? [15]

- 3.a) Why service organization need to provide higher capacity than their monthly requirement?
- b) "While standardization of input components can minimize production problems, ironically, complete standardization of finished products may have serious repercussions to marketing." Comment on the statement. [7+8]

4. What is value engineering? What are the important phases of value engineering? Briefly explain each of them. [15]

- 5.a) What is fixed job layout? Where do you come across it?
- b) What are the objectives of plant layout? [7+8]

6. A particular utility provider is trying to find the best location for a solid waste disposal station. At present four locations are located at the following coordinate locations: station I (4,12), Station II (6, 5), Station III (11, 8) and Station IV (1,13). The number of loads hauled monthly from these four stations to the master stations will be 400, 250, 300 and 450 units, respectively. Find out the best location for the master station and give its coordinates. [15]

7. Consider the following 3 machine and 5 job flow shop problem:

JOB	Processing time in hours at Machine 1	Processing time in hours at Machine 2	Processing time in hours at Machine 3
1	10	10	12
2	12	8	20
3	16	6	14
4	12	4	20
5	20	8	8

 - a) Check whether Johnson's algorithm can be extended to this problem.
 - b) If yes, find the optimal sequence and the corresponding make- span. [7+8]

- 8.a) Carrying cost = 12 %, Ordering cost Rs.8, Cost per unit Rs.2.50, monthly consumption 100 units. How is EOQ affected if shortage cost = Rs.15?
- b) What is VED analysis? Where is it most useful? [8+7]

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