

R19

Code No: 763AA

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

MBA III Semester Examinations, February - 2025

PRODUCTION AND OPERATIONS MANAGEMENT

Time: 3 Hours

Max.Marks:75

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

PART - A

(25 Marks)

- 1.a) Define productivity and its importance in operations. [5]
- b) Describe the process design and its role in manufacturing. [5]
- c) What is a plant layout? Discuss its classifications. [5]
- d) List the priority dispatching rules used in scheduling. [5]
- e) How is a purchase inventory model implemented? [5]

PART - B

(50 Marks)

2. Discuss and examine the generic competitive strategies in operations management with suitable example. [10]

OR

- 3.a) Compare and contrast flow, job shop, batch, and project production systems. [5+5]
- b) Brief on functional sub-systems of organization. [5+5]

4. Distinguish between Value Analysis and Value Engineering and give an example of each. [10]

OR

5. What are the advantages and applications of standardization? And illustrate the standardization procedure with suitable examples. [10]

- 6.a) Describe the models used for determining the coordinates of new facilities. [5+5]
- b) Brief on layout design procedures. [5+5]

OR

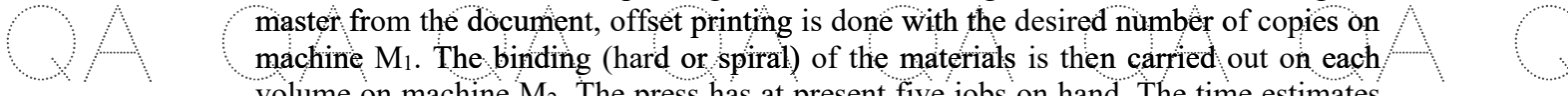
- 7.a) Compare and contrast product layout and group technology layout. [5+5]
- b) Brief on model to determine "X" and model to determine "Y". [5+5]

- 8.a) What are heuristic procedures in scheduling, and why are they used? [5+5]
- b) Illustrate the types of schedules. [5+5]

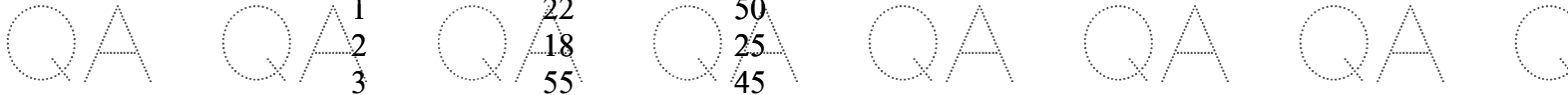
OR



9. Consider a printing press. Each job is processed through two machines M_1 and M_2 . Documents arrive there for printing books, articles, magazines, etc. After making the master from the document, offset printing is done with the desired number of copies on machine M_1 . The binding (hard or spiral) of the materials is then carried out on each volume on machine M_2 . The press has at present five jobs on hand. The time estimates for printing and binding for each job are worked out as follows.



Job No.	Time (hours) for	
	Printing (M_1)	Binding (M_2)
1	22	50
2	18	25
3	55	45
4	42	50
5	35	20



How do you sequence the jobs to minimize the finish time (the total time devoted by the press) of all the jobs? [10]



10. A manufacturing company places a semi-annual order of 24,000 units at \$20 per unit. Its carrying cost is 15% and the order cost is \$12 per order.
- a) What is the most economical order quantity?
- b) How many orders need to be placed? [5+5]

OR

11. What is the purpose of ABC, XYZ, VED, FSN, and SDE analyses? [10]



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