K. K. Wagh Institute of Engineering Education & Research, Nashik

(An Autonomous Institute From A.Y. 2022-23)

WINTER-2025	
Exam Seat No.:	
Academic Year:2025-2026	Semester:II
Class:PG-I	Program:MBA
Branch Code:10	Pattern:2024
Name of Course:Operations Management	Course Code:2410513
Max. Marks:60	Duration:2.30 Hrs.

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains 2 pages.
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

Marks CO

Question No. 1

1a) List the major phases of the Industrial Revolution and briefly describe Industry 4.0 (6) CO1

Question No. 2

2a) Discuss the characteristics of service design and explain the significance of service blueprinting. (6) CO2

Question No. 3

3a) Discuss the need, objective and functions of production planning and control. (8) CO3

OR

3b) Assume we have 7 jobs with processing times: (8) CO3

Job	Machine A	Machine B
J1	7	8
J2	8	3
J3	4	9
J4	5	2
J5	9	7
J6	4	6

Job	Machine A	Machine B
J7	8	4

Applying Johnson's Rule, Calculate the total processing time and Idle time for machine A and machine B.

3c) Describe Total Productive Maintenance (TPM) and its eight pillars (8) CO3

OR

3d) Discuss the different alternatives for managing demand and managing supply with examples. (8) CO3

Question No. 4

4a) Explain the importance of below concept in any Industry: (8) CO4

i. Inventory Management

ii. Quality Management

OR

4b) A manufacturing company needs 2500 units of a particular component every year. The order processing cost for this part is estimated at Rs. 15 and the cost of carrying a part in stock comes to about Rs, 4 per year. Determine: (8) CO4

a. EOQ

b. Total Cost under EOQ

c. The optimal number of orders in a year.

4c) Draw a customer gap model for a food industry. (8) CO4

OR

4d) Write in detail with example: (8) CO4

i) Six Sigma

ii) Lean Management

Question No. 5

5a) Discuss the various view in supply chain with example. (8) CO5

OR

5b) Draw and explain supply chain model structure for a retail company. (8) CO5

5c) Discuss in detail the enablers of Supply Chain. (8) CO5

OR

5d) Elaborate on key issues in SCM with examples. (8) CO5

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