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

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

SUMMER-2024	
Exam Seat No.:	
Academic Year:2023-2024	Semester:III
Class:S.Y.	Program:MBA
Branch Code:M.B.A.	Pattern:2022
Name of Course:Toyota Production System	Course Code:MBA22 3 4 07
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.
6. Solve (a) or (b) and (c) or (d) from Q. No. 3, 4 and 5.

Question No. 1 Attempt following Question

1a)	Explain the concept: a. “4P” model of the Toyota Way. b. ‘The Heart of the Toyota Production System’	(6)	CO1

Question No. 2 Attempt following Question

2a)	Explain the concept with examples i) ‘Long Term Philosophy’ ii) ‘Heizunka'	(6)	CO2

Question No. 3 Attempt following Question

3a)	Classify the Common Themes of Leadership at Toyota.	(8)	CO3
	OR		
3b)	Illustrate ‘Principle 14: Become a Learning Organization Through Relentless Reflection (Hansei) and Continuous Improvement (Kaizen)Philosophy’- with examples	(8)	CO3
3c)	Illustrate:’ Principle 11: Respect Your Extended Network of Partners and Suppliers by Challenging Them and Helping Them Improve’	(8)	CO3
	OR		

3d)	Illustrate: Principle 13: Make Decisions Slowly by Consensus, Thoroughly Considering All Options; Implement Rapidly (Nemawashi)' with examples.	(8)	CO3

Question No. 4 Attempt following Question

4a)	Give an overview of Lean implementation.	(8)	CO4

OR

4b)	Summarize the concept of Sustainable Manufacturing II	(8)	CO4
4c)	Assess the application of Flexible Manufacturing System at Toyota.	(8)	CO4

OR

4d)	Illustrate on Benchmarking at TPS.	(8)	CO4

Question No. 5 Attempt following Question

5a)	Assess the techniques to reduce Lead time and its process.	(8)	CO5

OR

5b)	Develop a Value Stream Mapping for a process in any industry.	(8)	CO4
5c)	Design a Kanban Board for any Manufacturing industry with proper explanations.	(8)	CO5

OR

5d)	A company has demand of 46 units/day, size of container is 3 units. Properly follow the below information:	(8)	CO5

a. There are few activities which are required from buffer B2 to B1 and these are represented by A, B, C, D.

A is waiting time in the mailbox = 42 minutes

B is the time which it takes in moving from this mailbox to the upstream workstation= 56 minutes

C is the moves back to the downstream station=80 minutes

D is waits in the downstream buffer until the container is accessed and the kanban is put back in the mailbox = 32 minutes

In a day, consider 480 minutes

Calculate the Conveyance Kanban for the following.

a. For Production Kanban following details are given:

A = 20 minutes

B= 1.5 minutes

C = 0.5 minutes

D = 0.5 minutes

Calculate the Production Kanban and then Total Kanban

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX