Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations – December 2025

Date: 23-12-2025 **Time:** 09:30am – 12:30pm

School: SOM-PG	**Program:** MBA	
Course Code: MBA3116	**Course Name:** Lean Supply Chain Management	
Semester: III	**Max Marks**: 100	**Weightage**: 50%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	25	25	25	25	

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 3marks. **10Q x 3M=30M**

1.	Enlist the three pillars of TPM	**3 Marks**	**L1**	**CO1**
2.	State the differences between a Lean Production System and a Traditional Manufacturing System	**3 Marks**	**L1**	**CO1**
3.	Explain the principle of "Develop Flow" in Lean Thinking. Why is it compared to "water flowing downstream"?	**3 Marks**	**L2**	**CO1**
4.	Describe how the 'Pull System' principle (the 4th principle) differs from a traditional forecast-driven 'Push' system.	**3 Marks**	**L2**	**CO1**
5.	Summarize the key benefits that manufacturing or service organizations will achieve by implementing Kanban System.	**3 Marks**	**L2**	**CO1**
6.	Define the 'Andon' system used in the Toyota Production System.	**3 Marks**	**L1**	**CO2**
7.	What is the Japanese term for "continuous improvement," and how do companies implement it?	**3 Marks**	**L1**	**CO2**
8.	List the benefits of Seiri, Seiton, Seiso, Seiketsu and Shitsuke.	**3 Marks**	**L1**	**CO2**
9.	Explain the philosophy behind Total Productive Maintenance (TPM)	**3 Marks**	**L2**	**CO2**
10.	Explain the calculations used to determine the Overall Equipment Effectiveness.	**3 Marks**	**L2**	**CO2**

Part B

Answer the Questions. **Total Marks 40M**

11.	**a.**	Presidency University's library is struggling with long queues for issuing books and complaints about finding materials. Apply the 5 Principles of Lean Thinking to propose one specific improvement for each principle (Value, Value Stream, Flow, Pull, Perfection) to solve this problem.	**10 Marks**	**L3**	**CO1**
		Or			
12.	**a.**	Consider examples of your own choice from manufacturing or service business and analyse the differences between "Mura" and "Muri". and how both of them lead to 'Muda'.	**10 Marks**	**L4**	**CO1**
13.	**a.**	Illustrate the Machine Loss Pyramid and show how the six-big equipment losses can be reduced or eliminated by OEE.	**10 Marks**	**L3**	**CO2**
		Or			
14.	**a.**	The maintenance garage of Bhagirathi at Presidency University campus has a cluttered tool cabinet and workstation. Apply the first three steps of 5S (Sort, Set in Order, Shine) and describe the specific actions you would take for each 'S' to organize this workspace	**10 Marks**	**L4**	**CO2**
15.	**a.**	A software development team is struggling with a high number of bugs being reported by customers after launch. Apply the A3 Problem-Solving steps to outline a structured plan for tackling this "high bug count" problem. List the 7 steps and the key question you would answer in each.	**10 Marks**	**L3**	**CO3**
		Or			
16.	**a.**	Analyze the "Barriers to Work Flow" (e.g., overproduction, inefficient layouts). How does Zara's strategy of "Vertical Integration" and "JIT Manufacturing" directly overcome at least three of these specific barriers?	**10 Marks**	**L4**	**CO3**
17.	**a.**	You are observing a restaurant/café in the Presidency University campus. Construct a simple SIPOC (Suppliers, Inputs, Process, Outputs, Customers) diagram for this restaurant/cafe.	**10 Marks**	**L3**	**CO4**
		Or			
18.	**a.**	You have been recently hired to conduct a Productivity workshop at KTM Motors, a two-wheeler manufacturer in Bengaluru. Identify the means that KTM can used to improve process productivity, operator productivity and equipment productivity. Justify these means with the help of relevant real-life examples.	**10 Marks**	**L4**	**CO4**

Part C

Answer all the Questions. Each question carries 15marks **2Q x 15M=30M**

19.	**a.**	A bespoke furniture company builds custom tables. Each table is unique. The process involves a lot of manual work, and inventory of raw wood is high. Customers complain that lead times are too long. a) The company wants to implement "Lean Systems" in their company to reduce costs and improve profits. Apply the different lean systems in the company considering the nature of the company in order to reduce costs and improve profits. (8 Marks) b) The company has developed a dedicated team to start using the Kanban and Small Lot Systems. Examine the different benefits that the company will generate with the help of these two tools. (7 Marks)	**15 Marks**	**L4**	**CO3**

20.	**a.**	MetalFab Solutions which makes metal roofing sheets, has a new Continuous Improvement (CI) team responsible for launching Lean Projects at their Itgalpur factory, throughout the corporation to reduce and eliminate wastage. You are the CI lead and you must manage the full Lean project lifecycle. a) Examine the tasks that you will perform as a CI lead in order to ensure the successful implementation of the Lean Projects undertaken by your team. (8 Marks) b) Demonstrate the different tools that you will use to map the processes at the Itgalpur factory in order to find and eliminate the bottlenecks. (7 Marks)	**15 Marks**	**L4**	**CO4**