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**PRESIDENCY UNIVERSITY
BENGALURU**

**SCHOOL OF ENGINEERING
END TERM EXAMINATION - AUGUST 2024**

Semester : II	Date : 19-08-2024
Course Code : MEC5014	Time : 09:30 am to 12:30 pm
Course Name : Lean Design & Manufacturing	Max Marks : 100
Program : M.Tech (MEC)	Weightage : 50%

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.
- (iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ANY 5 QUESTIONS

5Q X 2M=10M

1	Define Lean	(CO 1)	[Knowledge]
2	What are the 3 M's of Lean?	(CO 1)	[Knowledge]
3	What are the main objectives of Lean?	(CO 1)	[Knowledge]
4	List the The 5 S's of Lean	(CO 2)	[Knowledge]
5	List the 7 Wastes of Lean	(CO 2)	[Knowledge]
6	What is Lean Thinking?	(CO 2)	[Knowledge]
7	List the various Lean Tools	(CO 3)	[Knowledge]

PART B

ANSWER ANY 6 QUESTIONS

6Q X 5M=30M

8	What you understand about Toyota Production System?	(CO 1)	[Comprehension]
9	How do you differentiate Mass Production with Lean Production?	(CO 1)	[Comprehension]
10	From your point of view, what are the 7 forms of industrial wastes to be considered?	(CO 1)	[Comprehension]
11	How the 5 S's of Lean are used to assist the Manufacturing	(CO 2)	[Comprehension]

	Organization?		
12	Discuss the various factors that inhibit Lean	(CO 2)	[Comprehension]
13	Discuss the Mental Model of Lean Thinking with an example?	(CO 2)	[Comprehension]
14	How the Just In Time tool is used to improve the overall performance of the organization?	(CO 3)	[Comprehension]
15	How the DMAIC tool is used to improve the overall performance of the organization?	(CO 3)	[Comprehension]
PART C			
ANSWER ANY 3 QUESTIONS		3Q X 20M=60M	
16	With an example show how the 5 Lean Principles are considered a recipe for improving workplace efficiency	(CO 2)	[Comprehension]
17	Discuss how the Kaizan & Kanban Lean tool useful to industries?	(CO 3)	[Application]
18	Discuss how the TPM & TQM Lean tool useful to industries?	(CO 3)	[Application]
19	Discuss how implementation of Lean tool to any organization will helps in reducing waste, improving quality and productivity	(CO 4)	[Application]