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PRESIDENCY UNIVERSITY BENGALURU

SCHOOL OF ENGINEERING

END TERM EXAMINATION - AUGUST 2024

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

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Question paper consists of 3 parts.*
3. *Scientific and non-programmable calculator are permitted.*
4. *Do not write any information on the question paper other than Roll Number.*

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| **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] |
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| 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] | | |
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| 9 | How do you differentiate Mass Production with Lean Production? | (CO 1) | | | [Comprehension] | | |
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| 10 | From your point of view, what are the 7 forms of industrial wastes to be considered? | (CO 1) | | | [Comprehension] | | |
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| 11 | How the 5 S’s of Lean are used to assist the Manufacturing Organization? | (CO 2) | | | [Comprehension] | | |
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| 12 | Discuss the various factors that inhibit Lean | (CO 2) | | | [Comprehension] | | |
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| 13 | Discuss the Mental Model of Lean Thinking with an example? | (CO 2) | | | [Comprehension] | | |
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| 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] | | |
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