



**MBA DEGREE EXAMINATIONS: NOV / DEC 2024**

(Regulation 2021)

Third Semester

**MASTER OF BUSINESS ADMINISTRATION**

P21MBE0126: Lean Manufacturing

**COURSE OUTCOMES**

**CO1:** Explain the fundamental concepts of lean manufacturing and its application in business organisations.

**CO2:** Propose suitable lean tools and techniques to eliminate waste in business processes for productivity enhancement.

**CO3:** Display critical thinking skills in the application of suitable lean tools for process improvement.

**Time: Three Hours**

**Maximum Marks: 100**

**PART A (1Q x 20M = 20 Marks) Compulsory**

1. A large financial services firm, *FutureBank*, and a prominent healthcare provider, *HealthyCare Hospital*, both decided to implement Lean principles to reduce operational inefficiencies and improve customer satisfaction. CO3 [K<sub>4</sub>]

At *FutureBank*, the leadership identified several key wastes in their loan processing department. Loan approvals took weeks due to excessive documentation, multiple handovers, and redundant checks. This led to frustrated customers and a high rate of application abandonment. Management identified overprocessing, waiting time, and unnecessary motion as the major sources of waste.

Meanwhile, at *HealthyCare Hospital*, the management discovered that patient appointment scheduling was inefficient. Patients often had to wait for extended periods due to miscommunication between departments and improper allocation of doctor time slots. The hospital identified waiting time, defects in information flow, and excessive transportation (patients moving between departments unnecessarily) as significant areas of waste.

Both organizations undertook Lean initiatives to streamline their operations. *FutureBank* implemented process mapping and eliminated unnecessary documentation steps. They introduced a single-touchpoint system to reduce handovers. *HealthyCare Hospital* used the 5S methodology to organize schedules and streamline patient flow, while also improving communication between departments to reduce waiting time and unnecessary patient movements.

- a) Analyze the types of Lean wastes identified at *FutureBank* and

*HealthyCare Hospital*. How did Lean principles help reduce these wastes?

b) Evaluate the potential long-term benefits for *FutureBank* and *HealthyCare Hospital* after implementing Lean practices. What challenges might they face in sustaining these improvements?

**PART B (5Q x 4M = 20 Marks) Answer Any Five Questions Only**

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|----|--|-----|-------------------|
| 2. | Explain the concept of lean and how it is useful in improving the efficiency of an organization? | CO1 | [K <sub>2</sub> ] |
| 3. | Illustrate the relationship between lean and green manufacturing                                 | CO1 | [K <sub>2</sub> ] |
| 4. | Explain the concept of Just In Time(JIT) and how does it helpful for manufacturing companies?    | CO1 | [K <sub>2</sub> ] |
| 5. | Summarize the concept of Poka Yoke and how does it contribute to error reduction?                | CO1 | [K <sub>2</sub> ] |
| 6. | Explain how lean manufacturing is done through TPM   | CO1 | [K <sub>2</sub> ] |
| 7. | Illustrate how the concept of lean can be implemented in Marketing department?                   | CO1 | [K <sub>2</sub> ] |

**PART C (3Q x 20M = 60 Marks) Answer Any Three Questions Only**

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|-----|---|-----|-------------------|
| 8.  | Explain the importance of Kaizen events and the 5S methodology in continuous improvement. How do these tools contribute to a culture of sustained excellence in Lean manufacturing? | CO2 | [K <sub>2</sub> ] |
| 9.  | Evaluate how Total Productive Maintenance (TPM) principles, specifically the 8 TPM Pillars, contribute to overall equipment efficiency (OEE) in Lean manufacturing.                 | CO2 | [K <sub>5</sub> ] |
| 10. | Analyse the various wastes in Lean manufacturing and suggest ways to reduce it to increase efficiency   | CO2 | [K <sub>4</sub> ] |
| 11. | Examine how Lean Manufacturing can be done effectively with the help of IOT tools   | CO2 | [K <sub>4</sub> ] |

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