

P. Pages : 1

Time : Three Hours



AW - 3553

Max. Marks : 80

- Notes :
1. Answer **any three** question from section A and **any three** question from section B.
 2. Illustrate your answer necessary with the help of neat sketches.
 3. Use of pen Blue/Black ink/refill only for writing the answer book.

SECTION – A

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|----|----|--|---|
| 1. | a) | What do you understand by Lean thinking? Illustrate with suitable example. | 7 |
| | b) | Explain the basic concept of Lean manufacturing with its brief history. | 7 |
| 2. | a) | What are the internal and external customers in Lean thinking? | 6 |
| | b) | What are seven deadly wastes in Lean manufacturing? Explain with suitable examples. | 7 |
| 3. | a) | What do you mean by primary and secondary tools in Lean manufacturing? Explain any one in details. | 6 |
| | b) | What do you mean by high cost of quality? How Lean manufacturing can reduce it? | 7 |
| 4. | a) | What is the procedure for the identification of wastes in Lean Manufacturing? | 6 |
| | b) | Explain the concept of "Design for manufacturing and Assembly" with its benefits and applications related with Lean Manufacturing. | 7 |
| 5. | a) | Explain the concept of one piece flow production system in details. | 6 |
| | b) | What do you mean by rework? Is it desirable? Enlist the sources of rework. | 7 |

SECTION – B

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|-----|----|--|---|
| 6. | a) | Explain in details the goals of T.P.M. | |
| | b) | What are the pillars of T.P.M? Explain any one in detail. | |
| 7. | a) | Explain the different types of maintenance with suitable examples. | 6 |
| | b) | Explain the "Six big equipment losses" in detail. | 7 |
| 8. | a) | Explain the need of cellular manufacturing. What are the favorable conditions for successful implementation of it. | 6 |
| | b) | What do you mean by production flow analysis? Explain its procedure. | 7 |
| 9. | a) | What do you mean by visual management? What are the key benefits of visual management? | 7 |
| | b) | Explain the concept of SMED. What are the steps involved in implementing SMED concept. | 7 |
| 10. | a) | What are the factors responsible for sustaining of Lean Manufacturing. | 6 |
| | b) | What is the importance of Lean audit? Explain the procedure of Lean audit. | 7 |
