

M.E. First Semester (Mecha. Engg. (Adv. Manu. & Mech. Sys. Design)) (New-CGS)

**13464 : Elective - I : Lean Manufacturing : 1 MMD 5**

P. Pages : 1

Time : Three Hours



**AU - 3384**

Max. Marks : 80

- Notes :
1. All question carry equal marks.
  2. Answer **any three** question from Section A & **any three** question from Section B.
  3. Illustrate your answer necessary with the help of neat sketches.

**SECTION - A**

- |    |    |   |   |
|----|----|---|---|
| 1. | a) | Explain the organizational pressure in competitive markets, what are the solutions to overcome these problems ? | 6 |
|    | b) | Explain the different goals of lean manufacturing with examples.  | 7 |
| 2. | a) | What are the internal and external customers in lean thinking ?   | 6 |
|    | b) | What are the reasons for delayed supply ? Explain the impact of delay in supply.                                | 7 |
| 3. | a) | What do you mean by primary and secondary tools in lean manufacturing ? Explain any one.                        | 6 |
|    | b) | What do you mean by rework ? What are the common causes for defect in the product ?                             | 7 |
| 4. | a) | What do you mean by unnecessary transport ?   | 6 |
|    |    | What is the significance of unnecessary transport on the cost of product ?                                      |   |
|    | b) | Explain the step by step procedure of implementation of lean manufacturing.                                     | 7 |
| 5. | a) | What is the importance of training in successful implementation of lean.  | 7 |
|    | b) | What are the barriers in implementation of lean manufacturing in an organization ?                              | 7 |

**SECTION - B**

- |     |    |   |   |
|-----|----|---|---|
| 6.  | a) | Explain in details the goals of T.P.M.  | 6 |
|     | b) | What are the stages and steps in implementing TPM in an organization ?  | 7 |
| 7.  | a) | Explain the concept of JISHU-HOZEN.   | 6 |
|     | b) | What do you mean by OEE ? What are the different methods of improving the OEE ?                                 | 7 |
| 8.  | a) | Explain the need of cellular manufacturing. What are the favorable conditions successful implementation of it ? | 6 |
|     | b) | What are the different coding systems use in group technology ? Explain any one.                                | 7 |
| 9.  | a) | What do you mean by 'Mistake Proofing' what is the importance of this in lean manufacturing.                    | 6 |
|     | b) | What is visual management ? What are the four phases to visual management ?                                     | 7 |
| 10. | a) | Explain the concept of SMED with its benefits and applications.   | 7 |
|     | b) | What is the importance of lean audit ? Explain the procedure of lean audit.                                     | 7 |

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