



VII SEMESTER B.TECH (MECHANICAL/IP ENGG.) END SEMESTER

MAKE-UP EXAMINATIONS, DECEMBER 2017

SUBJECT: LEAN MANUFACTURING [MME 4007]

REVISED CREDIT SYSTEM

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

❖ Answer **ALL** the questions.

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| 1A. | What are the key questions for the future state mapping? Explain briefly. | 4 |
| 1B. | Why value stream mapping is an essential tool? Explain briefly. | 4 |
| 1C. | Why is lean manufacturing important? | 2 |
| 2A. | Explain two steps of data collection process in kanban sizing. | 4 |
| 2B. | Explain with the graphs, how the replenishment interval varies with the scrap, downtime and changeover time changes. | 4 |
| 2C. | Explain internal lead times and supplier lead times. | 2 |
| 3A. | Explain two phases of production smoothing with flow chart. | 4 |
| 3B. | Explain shortening waiting time and conveyance time. | 4 |
| 3C. | Draw the flow chart of frame work for reducing lead time. | 2 |
| 4A. | Explain the six techniques for applying the four setup concepts. | 4 |
| 4B. | Explain the procedure to prepare the standard operations routine sheet. | 4 |
| 4C. | Explain One-Shot Setup. | 2 |
| 5A. | Write a note on elimination of overproduction. | 3 |
| 5B. | Write a note on finished goods kanbans. | 3 |
| 5C. | Write a note on sequence scheduling smoothed production. | 2 |
| 5D. | Write a note on organization equipment improvement. | 2 |