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MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

VII SEMESTER B.TECH. (MECHANICAL/IP ENGINEERING)
END SEMESTER MAKE-UP EXAMINATIONS, DECEMBER 2018

SUBJECT: LEAN MANUFACTURING [MME 4007] (PE VI)

REVISED CREDIT SYSTEM
(01/12/2018)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **all** questions.
- ❖ Missing data may be suitably assumed.

- 1A.** What is Andon? Explain with neat sketches. **(3)**
- 1B.** Write a short note on Poka Yoke. **(3)**
- 1C.** Write a short note on job description for a value stream manager. **(4)**
- 2A.** Draw any eight icons used in value stream mapping and explain its significance. **(4)**
- 2B.** Explain with neat sketches production Kanban and withdrawal Kanban. **(4)**
- 2C.** What are the benefits of Kanban scheduling. **(2)**
- 3A.** Write a short note on calculating buffer in Kanban. **(3)**
- 3B.** Differentiate between economic order quantities and Kanban quantities. **4 (3)**
- 3C.** Explain how to maintain production smoothing during fluctuating market demand. **(4)**
- 4A.** Compare Kanban with MRP. **(3)**

- 4B.** Explain the framework for reducing lead time with a flow chart. **(4)**
- 4C.** Differentiate product flow layout and job shop layout. **(3)**
- 5A.** Explain four setup concepts used to reduce setup time. **(4)**
- 5B.** Explain how standard operations are determined in standardization of operations. **(4)**
- 5C.** What are internal and external setup time. **(2)**
