

Seat No: _____

Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech. Winter 2018 - 19 Examination

Semester: 1
Subject Code: 203208132
Subject Name: Lean Manufacturing

Date: 12/12/2018
Time: 10:30am to 01:00pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1** A) List 7 wastes in production system and explain any three in brief. **(05)**
B) Compare Lean manufacturing with conventional manufacturing. **(05)**
C) What is Agile manufacturing? List its key elements and explain any two in brief. **(05)**
- Q.2** **Answer the following questions.** (Attempt any three) (Each five mark) **(15)**
- A) Define JIT and list the major objectives. List the key elements of JIT and explain any two in brief.
B) Define and explain following with respect to Lean Manufacturing.
(i) Heijunka (ii) Jidoka
C) Compare Six Sigma with lean concept.
D) What is KAIZEN? What is its philosophy? List the implementation phases.
- Q.3** A) What is TPM? List the pillars of TPM system and explain each in brief. **(07)**
B) Explain KANBAN system. **(08)**

OR

- B) What is 5S? Explain each "S" in brief with suitable example. **(08)**
- Q.4** A) What is Value Stream Mapping (VSM)? Explain the procedure to conduct VSM. **(07)**
- OR**
- A) What is the SMED? Give five examples of techniques used for SMED. **(07)**
B) Define "TQM". What are the principles of TQM? Explain each in brief. **(08)**