



# P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

**Eighth Semester, B.E. - Industrial and Production Engineering**

**Semester End Examination; May/June - 2018**

**World Class Manufacturing**

*Time: 3 hrs*

*Max. Marks: 100*

*Note: Answer FIVE full questions, selecting ONE full question from each unit.*

### UNIT - I

- |   |    |
|---|----|
| 1 a. What is world class manufacturing and briefly summarize on manufacturing excellence and competitiveness in the field of world class manufacturing. | 10 |
| b. Explain Hall's framework of value added engineering.   | 10 |
| 2 a. Explain the following :  | 8  |
| i) Gunn's model of world class manufacturing  | 6  |
| ii) Maskell's model of world class manufacturing.   | 6  |
| b. Briefly explain practices of world class manufacturing followed.   | 6  |

### UNIT - II

- |  |                      |                          |    |
|--|----------------------|--------------------------|----|
| 3. Write a note on : i) Value stream mapping     |                      | ii) Rapid prototyping    | 20 |
| iii) Flexible manufacturing                      |                      | iv) Data collection plan |    |
| 4 a. Summarizes on information management tools. |                      |                          | 10 |
| b. Write a note on: i) Poka yoke                 | ii) SMED Techniques. |                          | 10 |

### UNIT - III

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|---|----|
| 5 a. What is a benchmarking? Explain the process of benchmarking. | 12 |
| b. Explain business process in benchmarking process.              | 8  |
| 6 a. Explain the concepts of step zero approach in benchmarking.  | 10 |
| b. List the advantages of benchmarking process.                   | 5  |
| c. Explain the objectives of benchmarking process.                | 5  |

### UNIT - IV

- |  |    |
|--|----|
| 7 a. What is Reengineering? Explain in briefly business process reengineering. | 10 |
| b. Explain the role of 3C's in Reengineering process.                          | 10 |
| 8. Write a note on the following :   | 8  |
| a) ISO 9000 series   | 8  |
| b) ISO 14000 series  | 4  |
| c) Mallolm baldridge national quality award                                    | 4  |

### UNIT - V

- |   |                               |                            |  |
|---|-------------------------------|----------------------------|--|
| 9 a. Define six sigma. Explain the core of six sigma. | 12                            |                            |  |
| b. Explain IDOV method of six sigma.                  | 8                             |                            |  |
| 10. Write a note on the following :                   | 20                            |                            |  |
| i) Activity based costing                             | ii) Activity based management | iii) Theory of constraints |  |