



## 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; June - 2017**

**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? Explain the Hall's Frame work of value added Engineering. 12
- b. Describe the Gunn's Model world-class manufacturing. 8
- 2 a. Write a note on : 10
- i) The customer interface                      ii) The supplier interfaces.
- b. Narrate the first principles of world class manufacturing. 10

### UNIT - II

- 3 a. Explain the following : 15
- i) Value stream mapping                      ii) FMS                      iii) Rapid Prototyping.
- b. Narrate Barcode system related to WCM. 5
- 4 a. Explain the following Information management tools : 10
- i) Product process design tools
- ii) Computer aided process planning
- iii) Group technology.
- b. With a block diagram, explain flexible processing and handling tools. 10

### UNIT - III

5. What is Bench marking? Explain the formal 10 steps bench manufacturing process. 20
- 6 a. Write a note on the following : 12
- i) What to Bench mark?                      ii) Focus on the investigation.
- b. Narrate about whom to Bench marks. 8

### UNIT - IV

- 7 a. What is Reengineering? Explain in detail business process reengineering. 10
- b. Write a note on Radical re-design and dramatic improvement. 10
8. Write a note on the following : 20
- i) Role of Information Technology
- ii) Frame work for business excellence
- iii) Quality systems.

**UNIT - V**

- 9 a. Explain the DMAIC methodology step by step briefly. 10
- b. Write a note on the following :
  - i) Implementing DFSS 10
  - ii) DFSS matrices
- 10 a. What is ABM? Explain the ABM uses in the different areas. 10
- b. Describe the theory of constraints in detail. 10

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