

Code: ME8T2B

**IV B.Tech-II Semester–Regular/Supplementary Examinations–April 2017**

**AUTOMATION IN MANUFACTURING  
(MECHANICAL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1. a) What are the types of automation? Explain the strategies involved in automation. 7 M
- b) Explain the pneumatic and hydraulic component circuits in automation machine tools. 7 M
2. a) Explain the word Lean manufacturing. Also give the principles of lean manufacturing in contemporary product realization. 7 M
- b) Explain about Product Life cycle Management. 7 M
3. a) What are the levels in implementation of automated flow lines? 7 M
- b) What do you understand by the term buffer storage in automation? 7 M

4. a) Explain line balancing methods. 7 M
- b) Write short note on flexible assembly lines. 7 M
5. a) Explain in detail of Material Requirements Planning. 7 M
- b) Describe the Flexible Manufacturing Systems. 7 M
6. a) Explain Manual Assembly Lines. 7 M
- b) What do you mean by retrieval systems in automated storage systems? 7 M
7. a) Explain adaptive control with optimization in a system. 7 M
- b) Briefly explain about – “Integration of information technology tools and approaches in supporting modern manufacturing enterprise systems.” 7 M
8. a) Write short note on concurrent engineering. 7 M
- b) Explain BPE logistics. 7 M