

IV B.Tech II Semester Regular Examinations, April/May 2005

AUTOMATION IN MANUFACTURE

(Common to Mechatronics and Production Engineering)

Time: 3 hours

Max Marks: 70

**Answer any FIVE Questions
All Questions carry equal marks**

1. (a) Describe the application of hydraulic and pneumatic control systems for automation.
(b) Explain tool changing and mechanical feeding.
2. (a) Describe the concept of automation in Machine Tools with examples.
(b) Explain with sketches work part transport.
3. (a) Describe the use of Material Handling Equipment in Machine Tools.
(b) Explain different types of assembly lines.
4. (a) Explain adaptive control and give examples of its application.
(b) Describe sensors and actuators used in adaptive control.
5. (a) Describe the design and fabrication of automated flow lines.
(b) Describe ways and means of improving line balance.
6. (a) Give the general terminology of transfer lines.
(b) Describe different types of buffer systems and compare these.
7. (a) Explain Business process Re-engineering and application.
(b) Describe MRP and ERP.
8. Write short notes on any THREE of the following:
 - (a) Work-in-process
 - (b) Pallets and fixtures
 - (c) AGV
 - (d) From-to-chart.
