

IV B.Tech I Semester Supplementary Examinations, April/May 2005
MECHATRONICS
(Mechatronics)

Time: 3 hours

Max Marks: 70

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Define mechatronics. Discuss the scope of mechatronics in industries for system development.
(b) What are the various drive mechanism involved in industries? Briefly explain their functions.
2. (a) Draw the neat sketches of various feeding mechanisms and discuss briefly.
(b) Name the various electronic controls used in industries. Discuss their relative merits and demerits.
3. (a) Define the following and discuss their importance.
 - i. Automation
 - ii. Mechanization
(b) Describe the merits of fluid power.
4. What are the critical elements involved in pneumatic systems? Discuss their functions and applications.
5. (a) What is the function of biselector? Discuss the important applications of biselectors.
(b) Discuss the advantages and limitations of pneumatic systems.
6. (a) Explain the various control systems used in hydraulic circuits.
(b) Briefly discuss the following:
 - i. Hydro pneumatics
 - ii. Electro hydraulics
7. (a) Discuss the special features of SPMs.
(b) Discuss the applications of SPMs in the present industries.
8. Write short notes on any three of the following:
 - (a) Sorting devices
 - (b) Applications of microprocessor control
 - (c) Servo control systems
 - (d) FMS
