

UNIT – II

Part A:

- 1) Mention the various components of a hydraulic system.
- 2) What is a pneumatic system?
- 3) List down the various components of a pneumatic system.
- 4) What are the advantages and disadvantages of pneumatic system?
- 5) What is the purpose of using filters in hydraulic system?
- 6) What are the factors to be considered for selecting compressors?
- 7) State the functions of control valves.
- 8) What is the use of flow control valves?
- 9) What are sequential valves?
- 10) Define actuator.
- 11) Classify actuators based on motion.
- 12) Define mechanism.
- 13) What is a cam?
- 14) Mention the use of ratchet and pawl mechanism.
- 15) At what conditions SPDT, DPST and DPDT switches are used?
- 16) What are the factors to be considered for selecting solenoids?
- 17) What is the principle of relay?
- 18) What is Zener voltage?
- 19) What are the types of field effect transistor?
- 20) What is TRIAC?
- 21) Classify electrical motors.
- 22) List down the features of synchronous motor.
- 23) What is a stepper motor?
- 24) What is fast and loose pulley?
- 25) How do chain drives differ from rope and belt drives?
- 26) Mention the disadvantages of chain drives.

Part B:

- 1) Name the hydraulic components, draw their symbols and explain their use.
- 2) Explain how control valves can be used as processing elements?
- 3) Explain sequencing of cylinders.
- 4) Distinguish between hydraulic and pneumatic systems.
- 5) With help of a block diagram, explain signal flow in fluid power system.
- 6) Design a pneumatic circuit to give a sequence of A^+ , B^+ and the retraction of both cylinders simultaneously.
- 7) Describe the various functions of mechanisms.
- 8) Give classification of an electric motor.
- 9) Explain the working principle of synchronous motor.
- 10) Explain the working principle of AC servo motors.
- 11) Explain the principles of induction motor and list their advantages.
- 12) Explain the working of stepper motor.
- 13) Explain how a Thyristors can be used to control the level of a DC voltage.
- 14) What are the major differences between JFET and MOSFET?