MET 002

Mechatronics

Max. Marks: 100

10

- (a)Discuss in brief about the basic requirements of a sensor/transducer. 10
 (b)Explain the specification and testing of dynamic response. 10
- 2. (a)Discuss the various application of photoelectric sensor with neat sketch.

(b)Describe the working of any cam controlled system with the help of suitable example. 10

3. (a)List the methods by which the efficiency of a reciprocating compressor can be improved. Explain any one of them in detail.10

(b)Explain the various ways of controlling the actuator speed by means of a flow control valve. Discuss their relative advantages and disadvantages. 10

- 4. (a)Explain the working of servo motors with the help of a neat sketch. 10
 (b)Show the binary addition and subtraction of 125 (decimal) and 200 (decimal). 10
- 5. Differentiate between the following 2.5*4=10
- a) an air-amplifier and intensifier.
- b) Closed loop and open loop control system
- c) Microprocessor and microcomputer
- d) Ladder logic and relay logic
- 6. Write short notes on the following: 2.5*4=10
- a) Transfer systems
- b) Piston pumps
- c) Armature speed control
- d) relay