

Total No. of Pages : 01

Total No. of Questions : 08

M.Tech.(CAD/CAM) (Elective-II) (Sem.-2)

MECHATRONICS

Subject Code : ME-514

Paper ID : [E0868]

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

1. Explain the construction and working principle of any four pneumatic directional control valves with the help of neat sketch.
2. What do you mean by operational amplifier? Discuss various configurations of operational amplifiers.
3. What is the procedure for selection of sensor? Discuss any two force sensor.
4. Explain the following with their applications :
 - a) Hall effect sensor
 - b) Tachometer
 - c) Absolute optical encoder
 - d) Resolver
5. What do you mean by modeling element? Distinguish between physical and mathematical model.
6. Explain the constructional features of the DC motor with a neat sketch and describe the working of an AC servo motor.
7.
 - a) Illustrate in detail Computer and interfacing.
 - b) Write a detailed note on PLC.
8. Describe the construction and working principle of microprocessor with the help of schematic diagram and list its applications.