

Question Bank (G scheme)

Name of subject: **BASIC ELECTRONICS & MECHATRONICS** Unit Test :II

Subject code : 17302

Course : ME

Semester: III

4 Marks Questions :

Chapter – IV

1. Write truth table for XOR and XNOR gate. Draw their symbols.
2. What is multiplexer. Draw logical symbol of 4:1 multiplexer.
3. Compare microprocessor and microcontroller.
4. What is flipflop ? List types of flip- flop and state its applications.
5. What is half adder ? Draw logical circuit of half adder along with its truth table.
6. Sketch 4-bit asynchronous counter.

Chapter –V

1. With a suitable example explain the concept of primary and secondary transducer.
2. Explain the selection criteria for the transducer for any application.
3. Explain the operation of analog to digital convertor.
4. Draw and explain single channel data application system.
5. Give two examples each of Active and Passive Transducer.

Chapter –VI

1. List the advantages and disadvantages of Mechatronic system.
2. What is PLC ? draw the block diagram and state applications of PLC.
3. Draw the block diagram of CNC machine and explain its operation.
4. State the features of real time mechatronics.
5. List criteria for selection of PLC for an application.
6. With the help of neat labeled diagram explain FMS.

3 Marks questions :

Chapter -IV

1. Define logic gate and truth table.
2. Draw symbol of AND , OR & NOT gates.
3. Write truth tables for AND , OR & NOT gates.
4. Draw symbol of S-R and J-K flip flop.
5. Write two differences between D flip flop and T flipflop.
6. Draw block diagram Microprocessor and Micro controller.

Chapter –V

1. What is transducer ? Classify.
2. State the meaning of ADC.
3. What is A.C. Signal Conditioning.
4. Draw block diagram of D.C signal conditioning system.
5. What is data logger. Give any four applications.
6. State the role of DAS in brief.

Chapter –VI

1. What is mechatronics. Write applications.
2. What are basic elements of mechatronics.
3. What is FMS ? Give its advantages.
4. Define PLC.
5. State types of Robotics.