SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

ROLL No: | | | | | | | | | | | | |

Total number of pages:[2]
Total number of questions:06

B.Tech. || EE ||6th Sem

Microcontrollers and PLCs

Subject Code:- BTEE-604

Paper ID:

Scheme C2011 onwards)

Time allowed: 3 Hrs **Max Marks: 60**

Important Instructions:

- **All questions are compulsory**

PART A (2×10)

Q. 1. Short-Answer Questions: All COs

(a) How is PLC response time calculated?
(b) What is Emulators?
(c) Define PSEN?
(d) Difference between Level and Edge Triggered Interrupts?
(e) What is SFR ?
(f) Explain System Debugging?
(g)Explain the concept of Sinking and Sourcing?
(h)What are the Advantage of PLC
(i) Define Baud rate ?
(j)Explain LJMP and LCALL instructions?

PART B (8×5)

Q. 2. What are various addressing modes in microcontroller 8051? Explain them with suitable examples CO2

OR

Explain Various type of Instructions in 8051 with example CO2

Q. 3. Show the microcontroller 8051 connection to the stepper motor and explain it. Also write code program to rotate it continually'? CO3

OR

Show the microcontroller 8051 Interfacing two Seven-Segment LED Displays and explain it. Also sample Program that continuously displays two characters, "HI" CO3

Q. 4. What is a PLC? Explain PLC Components in Detail? CO4

OR

Explain Various Symbols used to make a Ladder Diagrams and explain with example? CO4

Q. 5. Explain 8051 Microcontrollers with Block Diagram in detail? CO1

OR

What is difference between Microprocessor and Microcontroller detail? CO1

Q. 6. Explain TCON and TMOD Detail? CO2

OR

What is Interrupt in 8051 and also explain IE and IP? CO2