

SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

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Total number of pages:[2]

Total number of questions: 06

B.Tech. || ECE || 5th Semester

Microprocessors & Microcontrollers

Subject Code: BTEC-504

Paper ID:

Time allowed: 3 Hrs

Max Marks: 60

Important Instructions:

- All questions are compulsory
- Assume any missing data

PART A (2×10)

Q. 1. Short-Answer Questions:

All COs

- (a) Explain the bus structure of 8085?
- (b) Explain READY and HLDA pins of 8085?
- (c) What is the maximum memory that we can interface with 8085? Give its address range?
- (d) Why in 8085 micro-processor, the Program Counter and Stack Pointer are 16-bit registers?
- (e) Give an example of one-byte, two-byte and three byte instructions used in 8085?
- (f) What are the important features of 8051?
- g) What is difference between LJMP and SJMP instructions of 8051?
- h) What do you mean by serial communication?
- i) What is the significance of SBUF and TCON registers?
- j) What is the capacity of in built ROM and RAM in 8051?

PART B (8×5)

Q. 2. How many registers are there in 8085 microprocessor? Explain the use of each register? CO1

OR

Explain the function performed by Microprocessor 8085 when following instructions are to be executed independently : CO1

XCHG, LDA D000H, SUI 50H, STC, NOP

Q. 3. Explain 8051 pin structure with a neat diagram? CO2

OR

List the various Special Function Registers (SFR's) used in 8051? Explain the use of IE and IP in detail? CO2

Q. 4. What are the different addressing modes used in 8051? Explain giving an example of the each? CO3

OR

Write an 8051 assembly program to generate a square wave of 50% duty cycle on the P1.5 bit. Use Timer 0 in mode 1 to generate the time delay? CO3

Q. 5. Differentiate between serial and parallel data transfer? Which special function registers are used for serial communication in 8051 micro-controller and how? CO4

OR

Show and explain interfacing of ADC with micro-controller 8051? CO4

Q. 6. What are the various interrupts used in 8085? Explain the use of RIM and SIM instructions in 8085? CO1

OR

Write a short note on Stack and Subroutines used in microprocessor 8085? CO1
