

SV - 456

Seat No.	
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Total No. of Pages : 2

T.E. (Electronics and Telecommunication Engineering)
(Semester - VI) Examination, May-2018
MICROPROCESSOR & MICROCONTROLLER (Revised)
Sub. Code : 66918

Day and Date : Tuesday, 08 - 05 - 2018

Total Marks : 100

Time : 02.30 p.m. to 05.30 p.m.

- Instructions:
- 1) All questions are compulsory
 - 2) Figures to the right indicate full marks.
 - 3) Assume suitable data if necessary.

Q1) Attempt any two of the following: [2 × 8 = 16]

- a) Explain various Addressing modes of 8085 with two examples each.
- b) Draw and Explain Machine Cycle of Instruction LXI H 3050H.
- c) Explain what is Stack and subroutine and mention its use and also explain how conditional CALL instructions are executed by 8085.

Q2) Attempt any two of the following: [2 × 8 = 16]

- a) Differentiate between Memory mapped I/O and I/O Mapped I/O.
- b) Interface and Explain 8K×8 RAM to 8085 using 4K×8 RAM chip with starting address C000H.
- c) Interface four common anode seven segment displays to 8085 using 8255 and write a program to display continuously "HELP" on it.

Q3) Attempt any two of the following: [2 × 9 = 18]

- a) Draw and Explain Functional Pin out diagram of 8051.
- b) Draw and Explain PSW of 8051 and also explain Reset circuit and oscillator circuit of 8051.
- c) Explain various types of Conditional and Unconditional JUMP instructions in 8051. What is difference between CALL and JMP instruction execution?

P.T.O.

Q4) Attempt any two of the following:

[2 × 8 = 16]

- Explain in detail the alternate functions of port 3. Also draw the internal structure of any port pin of 8051.
- Write an assembly language program for 8051, to transmit data stored at RAM location 50H serially at baud rate 9600. Assume crystal frequency = 11.0592MHz.
- Draw and explain block diagram of mode 0 of timer 1 in 8051. Also draw the format of TMOD SFR.

Q5) Attempt any two of the following:

[2 × 9 = 18]

- Draw 8051 based detailed interfacing diagram of Temperature Displaying system using LM35 sensor. Write the detail algorithm to display the temperature on LCD.
- Draw the interfacing diagram of DAC 0808 to 8051. Write a program to generate trapezoidal waveform.
- Interface 8k × 8 ROM to 8051 using memory chips of 8k × 4 capacity. Write the use of each pin used for interfacing. Also mention the start and end address of the memory.

Q6) Attempt any two of the following:

[2 × 8 = 16]

- Write an embedded C program to send out the value 22H serially one bit at a time via P1.2. The LSB should go out first.
- Write an embedded C program to generate a square wave of 1 KHz on pin P1.0 of 8051 using Timer 0.
- How to access code ROM space in 8051 using embedded C explain with example.

