4459

BOARD DIPLOMA EXAMINATION, (C-14)
JUNE-2019
DECE - FOURTH SEMESTER EXAMINATION

MICROPROCESSOR & MICROCONTROLLER PROGRAMMING

Time : 3 Hours]   **[Max. Marks: 80**

PART - A

10x3=30M

Instructions: 1) Answer all questions and each question carries three marks.

            2) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1) List the features of microprocessors.

2) List the machine cycles involved in execution of STA and IN instructions.

3) Compare microprocessors and microcontrollers.

4) List the special function registers involved in programming timers/ counters of 8051.

5) State the need of instruction set.

6) Distinguish between machine cycle and T-state.

7) Give the various symbols used in drawing of flow charts.

8) Define a subroutine and explain its use.

9) List RS 232 pins of DB 9 connector.

10) What are RS232 standards?

PART - B

Instructions: 1) Answer any five questions and each question carries ten marks.

2) Answers should be comprehensive.The criteria for valuation is the content but not the length of the answer.

11) Draw the pin diagram of 8085 and explain the function of each pin.

12) (a) Explain the multiplexing of Address and Data bus in 8085 processor. 5M

b) Explain the concept of single step and break point debugging techniques. 5M

13) Draw the functional block diagram of 8051 and explain the function of each block.

14) (a) Explain interrupts of 8051.

(b) Describe the bit assignment of SCON register in 8051.

15) Explain the data transfer instructions of 8051.

16) State and explain diffferent addressing modes of 8051.

17) Write a program for sum of n 8-bit numbers. The starting address of the series of numbers is 6045H. Store the high order byte of the result in 30H and low order byte 6031H.

18) Write a program to generate a square wave of frequency 100Hz with duty 60% duty cycle on bit 2 of port2, using timer 1.

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