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BOARD DIPLOMA EXAMINATION, (C-09)
MARCH/APRIL—2021
DECE - SIXTH SEMESTER EXAMINATION

MICROCONTROLLERS

Time : 3 hours] [*Total Marks* : 80

PART—A

4×5=20

Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **four** marks.

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

1. Compare microcontrollers and microprocessors.

2. List any four features of 8051 microcontrollers.

3. Give the instruction format of 8051.

4. List the flags of 8051.

5. Classify the instruction set of 8051.

6. Define subroutine and state its use.

7. Define the term debugging of a program.

8. State the need for interfacing.

9. List any four ICs used for interfacing peripherals with 8051.

10. State the features of 8257.

Instructions : (1) Answer *any* **four** questions.

(2) Each question carries **fifteen** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Draw the block diagram of a microcomputer and explain the function of each block.

12. Draw the pin diagram of 8051 microcontroller and state the purpose of each pin.

13. Explain various addressing modes of 8051 with one example for each addressing mode.

14. Explain any five data transfer groups of instructions.

15. Explain the sequence of program when a subroutine is called and executed.

16. List different unconditional and conditional CALL and RETURN instructions.

17. Draw the functional block diagram of 8255.

18. State the need for communication interface and draw the pin diagram of 9 pin RS-232 standard.

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