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C14-EC–405

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BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2021

DECE - FOURTH SEMESTER EXAMINATION

MICROPROCESSOR AND MICROCONTROLLER PROGRAMMING

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. List any four features of microprocessors.

2. Define the terms *(a)* operation code and *(b)* operand.

3. Compare microprocessors and microcontrollers.

4. List any four special function registers of 8051.

5. Define the terms *(a)* machine cycle and *(b)* T-state.

6. State the need of instruction set.

7. Define subroutine and state its use.

8. Define the term 'debugging a program'.

9. Define the term 'baud rate'.

10. List the applications of 8051 microcontroller.

PART—B

15×4=60

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. Explain multiplexing of address and data bus in 8085 microprocessor

12. *(a)* Define fetch cycle, execution cycle and instruction cycle.

(b) List any three jump instructions of 8051.

13. Draw the pin diagram of 8051 microcontroller and name each pin.

14. Explain the internal memory organization of 8051.

15. Explain any three data transfer group of instructions.

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

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

18. Write an 8051 assembly language program to introduce a delay of one microsecond. Assume that the clock frequency is 12MHz..

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