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BOARD DIPLOMA EXAMINATION, (C–14)
SEPTEMBER/OCTOBER - 2020
DEEE—SIXTH SEMESTER EXAMINATION

MICROCONTROLLERS AND APPLICATIONS

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

PART—A 3×10=30

Instructions **:** (1) Answer **all** questions.

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

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

1. List the features of 8051 microcontroller.

2. Distinguish between RISC and CISC processors.

3. Explain the concept of peripheral interfacing.

4. Define opcode and operand of an instruction.

5. List the special function registers in 8051.

6. List the interrupts in 8051 microcontroller.

7. Define a subroutine and mention its use.

8. Define stack pointer and program counter.

9. Define push instruction.

10. List the rotating instructions.

PART—B

10×5=50

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

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

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

11. Draw the block diagram of 8085 and explain.

12. Draw the pin diagram of 8051 microcontroller and explain each pin.

13. Explain the addressing modes of 8051 microcontroller with examples.

14. Explain the following instructions :

(a) MOV DPTR, # data 16

(b) XCHD A, @ Ri

(c) SWAP

(d) DIV AB

15. Write a program to find the sum of two 16-bit numbers. Assume that two numbers are 6A25H and 3074H.

16. Describe the timers and counters in 8051.

17. Explain the working of 8051 microcontroller as dot matrix display interface with a neat sketch.

18. Explain the working of 8051 microcontroller as keyboard interface with a neat sketch.

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