C14–EE–**605**

4745

BOARD DIPLOMA EXAMINATION, (C–14)

JUNE—2019

DEEE-SIXTH SEMESTER EXAMINATION

MICROCONTROLLERS AND APPLECATIONS

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.   Differentiate between Harvard and Von Neumann architectures.

2.   State the RS-232 Standards.

3.   Define the terms byte, data and address

4.   Draw the block diagram of 8255.

5.   List the interrupts in 8051 microcontroller.

6.   List the special function registers.

7.   State the need for an instruction set.

8.   Define machine cycle and T-State.

9.   List the various symbols used in flowchart.

10.   Define subroutine and explain its use.

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. Describe the features of Intel 8085

12. Draw the functional block diagram of a 8051 microcontroller and explain the function of each block

13. Explain the data transfer instruction of 8051 with examples

14. Draw and explain timing diagram for memory write and memory read operations.

15. Write a program to multiply two 8 bit numbers using MUL instruction

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

17. Explain the working of 8051 microcontroller in traffic light controller.

18. Explain the working of 8051 microcontroller as a seven segment display interface.

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