C14-EE-**605**

# 4745

## BOARD DIPLOMA EXAMINATION, (C-14)
## MARCH /APRIL-2019
## DEEE - SXITH SEMESTER EXAMINATION

MICRO CONTROLLERS AND APPLICATIONS

Time:3 Hours Max.Marks:80

**PART-A**

**10x3=30M**

***Instructions:*** 1) Answer **all** questions. Each question carries **3** marks.
2) Answer should be brief and straight to the point and shall not exceed **five** simple sentences.

1) Differentiate between CISC and RISC processors.

2) Distinguish between micro, mini and large computers.

3) List the three commonly used microcontroller device families.

4) Draw the functional block diagram of 8051 microcontroller.

5) State the need of timers and counters in 8051 microcontroller.

6) List any six special function registers.

7) State the need for an instruction set.

8) Distinguish between machine cycle and T-state.

9) Draw the flowchart for addition of two 8-bit numbers.

10) Define subroutine and explain its use.

## PART-B

**5x10=50M**

***Instructions:*** 1) Answer any **Five** questions. Each question carries **Ten** marks.
2) Answer should be comprehensive and the criteria for valuation is the content but not the length of the answer.

11) Explain the concept of peripheral interfacing.

12) Draw the pin diagram of 8051 micro controller and specify the function of each pin.

13) Explain the data manipulation functions of 8051 with examples.

14) a) Explain the fetch cycle, execution cycle and instruction cycle. 6M
b) Define the terms : machine language & assembly language. 4M

15) Write a program to find the biggest of given Numbers.

16) Write a program to generate 5ms time delay. Assume the 8051 crystal frequency is 11.0592 MHz. Set the timer 0 under mode-1.

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

18) Explain the working of 8051 microcontroller as keyboard interface.

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