

Code No. 3337

FACULTY OF SCIENCE**B.Sc. VI-Semester (CBCS) Examination, May / June 2019****Subject : Electronics****Paper – VIII-A : 8051 Microcontroller and Applications (DSE E-1)****Time : 3 Hours****Max. Marks: 60****PART – A (5 x 3 = 15 Marks)****(Short Answer Type)****Note : Answer any FIVE of the following questions.**

- 1 What are SFR registers?
- 2 Give the data directives used in 8051 μ C.
- 3 Differentiate between short jump and long jump instructions.
- 4 Explain how stack is implemented in 8051 μ C?
- 5 Write an ALP to divide any two given numbers.
- 6 What will be the continuous output at port-0 after the execution of the following program

```
MOV A, #55H
BACK: MOV PI, A
ACALL DELAY
CPL A
SJMP BACK
```

- 7 Give the structure of SCON register.
- 8 Draw the matrix of a key board.

PART – B (45 Marks)**(Essay Answer Type)****Note: Answer ALL the questions.**

- 9 (a) Explain the architecture of Intel 8051 Microcontroller with block diagram. 11M
OR
(b) Explain the port organization of 8051 μ C, in detail. 11M
- 10 (a) List and explain the various addressing modes used in 8051 μ C, with suitable examples. 8M
What are the addressing modes used in the following instructions 3M
i) MOV A, #42 ii) MOV A, R5 iii) MOV A, @R0
OR
(b) List and explain the various type of instructions, used in 8051 μ C with suitable examples. 11M
- 11 (a) Write an assembly language program to find out the largest number among the given 10 numbers. 11M
OR
(b) Give TMOD and TCON registers. Assume that XTAL = 11.0592 MHz. What value do we need to load in the timer's register if we want to have a time delay of 5 ms. 4+4+3M

- 12 (a) Give different types of serial communication. What are RS232 standards. 6+6M

OR

- (b) Explain the interfacing of ADC 0804 to 8051 μ C