

Total No. of Questions : 4]

SEAT No. :

PF204

[Total No. of Pages : 2

APR-26/SE/Insem-250

S.E. (Electrical Engineering) (Insem)

FUNDAMENTAL OF MICROCONTROLLER AND APPLICATIONS

(2019 Pattern) (Semester - IV) (203149)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Solve Q.1 or Q.2 and Q.3 or Q.4.*
- 2) *Figures to the right indicate full marks.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Assume suitable additional data, if necessary.*
- 5) *Use of non-programmable calculator is allowed.*

Q1) a) Answer the following questions [8]

- i) What is the purpose of EA pin in 8051 Microcontroller.
- ii) What is the function of ALE signal?
- iii) Describe DPTR.
- iv) Write instruction to select register bank 2

b) Assume internal RAM location Values [7]

Address	Data
[20]	=10H,
[21]	=20H
[22]	=30H
[23]	=40H
[24]	=50H
[25]	=60H

What will be output of each instruction after execution

MOV R0, 20H
INC R0
MOV 25H, R0
MOV R0, 24H
MOV 23H, 25H

OR

P.T.O.

- Q2) a)** Explain following instructions. [8]
- i) MOV A, 50H
 - ii) MOV R7,#50H
 - iii) MOV 50H,55H
 - iv) Push 25H

- b) Draw and Explain Program status word of 8051 micro controller. [7]

- Q3) a)** Explain the various addressing modes of 8051 and give one example of each addressing mode. [7]

- b) Write a program to multiply two numbers stored in RAM location 35H and 36H and store the result at location 55H and 56H. [8]

OR

- Q4) a)** Explain the following instructions [7]

- i) CINE X, Y, Label
- ii) DJNZ Count, Label
- iii) JC Label
- iv) JNZ Label

- b) What is the output of the following program after each instruction.[8]

CLR C;

MOV A, #26H;

RRC A ;

RRC A ;

Swap A ;

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