[6008]-216

S.E. (Electrical) (Insem)

FUNDAMENTALS OF MICROCONTROLLER & APPLICATIONS

(2019 Pattern) (203149) (Semester - II)

Time : 1 Hour]   *[Max. Marks : 30*

Instructions to the candidates :

1) *Answer any two questions from the following.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Figures to the right indicate full marks.*
4) *Assume suitable data, if necessary.*

Q1) a) Explain in detail Program Counter register (PC) & Stack pointer register (SP). **[4]**

b) Write a program to copy the content of external data memory location 3000H to internal memory location 20H. **[5]**

c) Explain RAM memory Organization of 8051. **[6]**

OR

Q2) a) Explain the functions of B register & Data Pointer register (DPTR). **[4]**

b) Write program to copy the content of 35H RAM memory location to A register, DPH register & 45H RAM memory location. **[5]**

c) Explain Program Status word (PSW) with control word format. **[6]**

Q3) a) Explain following Instructions. **[4]**
   i) ANI A,R1 ii) DIV AB

P.T.O.

b) Write program for addition of two 8 bit numbers. The numbers are 10H and 0A1H respectively & store result at External memory location 2000H.

[5]

c) Explain addressing modes of 8051 microcontroller with example. **[6]**

OR

Q4) a) Explain any 5 bit-oriented instructions of 8051 Microcontroller. **[5]**

b) What is the result of A ,B, Ro & DPTR register after Execution of below Program **[5]**

MOVX A, @DPTR

MOV R0,B

MOV B, A

If A = 12H, DPTR = 2500H, 2500H = 0ABH, B = 45H

c) Write short note on Jump Instructions. **[5]**

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