Total No. of Questions : 6] **SEAT No. :**

P5025 **[Total No. of Pages : 2**

TE / INSEM - 523

T.E. (E&Tc)

MICRO CONTROLLERS AND APPLICATIONS

Electronics and Telecommunication Engineering

(2012 Pattern)

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

Instructions to the candidates:

1) ***Attempt Q.1, or Q.2, Q.3 or Q.4, Q.5 or Q.6.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full Marks.***
4) ***Use of Calculator is allowed.***
5) ***Assume suitable data, if necessary.***

Q1) a) Compare RS232C with RS485 **[5]**

b) Explain I2C protocol for serial data transmission. **[5]**

OR

Q2) a) Explain selection criteria and limitations of Microcontroller. **[5]**

b) With the help of neat block diagram explain the operation of logic analyzer. **[5]**

Q3) a) Draw and explain the memory organization of 8051 microcontroller **[5]**

b) Explain PSW of 8051 in detail and write instruction for selection of Bank2 . **[5]**

OR

Q4) a) Explain block schematic of Timer/Counter, State SFRS required **[5]**

b) Draw SCON register and calculate the count to be placed in TH1 for generation of baud rate 4800. (With SMOD = 0/1) **[5]**

P.T.O

Q5) a) State Important features of the PIC 18 Microcontroller. **[5]**

b) Explain Data memory organization of PIC 18F, Comment on bank select register. **[5]**

OR

Q6) a) Explain the role of TRIS, LAT and POR T register with example. **[5]**

b) Explain Brown - out detection (BOD) and Power - on Reset concepts for PIC microcontroller. **[5]**

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