S.8

Code No : 9A04602/R09

Set-2

III B.Tech. II Semester Regular and Supplementary Examinations

April/May - 2013

MICROPROCESSORS AND MICROCONTROLLERS

(Common to EEE, ECE, CSE, EIE, and E.Con.E)

Time: 3 Hours | Max. Marks: 70

*Answer any **FIVE** Questions*

*All Questions carry **Equal** Marks*

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1. (a) Discuss the memory segmentation in 8086 microprocessor.

   (b) Briefly explain the architecture of 8086 microprocessor with a neat sketch.

2. Assume that the symbol table starting at location TABLE consists of 100 entries. Each entry has 80 bytes with the first 8 bytes representing the name field and the remaining 72 bytes representing the information field. Write an instruction sequence to search this table for a given name of 8 characters stored in NAME. If the name is found, copy the associated information into INFO, otherwise, fill INFO with null characters.

3. (a) Explain the control pins used in minimum mode operation.

   (b) Differentiate minimum and maximum mode of 8086.

4 (a) With neat layout, explain how a microprocessor can be used for data acquisition system using A/D converters and D/A converters.

   (b) Explain in detail about the interrupt structure of 8086 microprocessor.

5 (a) What is the significance of SYNC DETECT and BREAK DETECT signals in 8251?

   (b) Define command word and status word register of 8251.

6 (a) Draw the pin diagram of 8259 and explain briefly about the function of each pin.

   (b) Draw the internal block diagram of 8259 and explain about each block.

7 (a) Write program to load accumulator, DPH and DPL using 8051.

   (b) Write short notes on the use of control signals $\overline{WR}$ and $\overline{RD}$.

8 Explain address mapping and memory mapping in detail about MCS-96 micro controllers.