Code No.: 9A04602/R09

Set-4

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) Write an assembly language program that will examine an ASCII string of 100 characters and replace each decimal digit by a %. The character string starts at STRG. (
   (b) Explain the prefix instruction format of 8086 processor. Discuss how these instructions are useful in string manipulation.

2. (a) Write an ALP in 8086 to multiply two 16-bit numbers and the result is 32-bit.
   (b) Write an ALP in 8086 to add two 8 bit ASCII numbers.

3. (a) What are the registers available in 8257? What are their functions?
   (b) Draw and discuss the status register of 8257.

4. (a) Give the relevant hardware and software for interfacing stepper motor to 8086 based system.
   (b) Explain A/D converter interface to 8086 micro processor.

5. (a) Define mode word register of 8251 for asynchronous mode.
   (b) Define mode word register of 8251 for sync mode.

6. (a) With neat block diagram explain the functions of 8259.
   (b) Explain the programming sequences of PIC along with flow chart explain each command word in detail.

7. (a) Write a program to load accumulator A, DPH and DPL with 30H.
   (b) Write short notes on external interrupts of 8051.

8. (a) What is the difference between Interrupt Request (IRQ) and Fast Interrupt Request (FIQ) in ARM? Explain.
   (b) Compare the CPSR and SPSR registers formats and their purpose in different modes of ARM processor operations.