**Code: 9A04602**

**R09**

B.Tech III Year II Semester (R09) Supplementary Examinations December/January 2015/2016
**MICROPROCESSORS & 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 ALP in 8086 to subtract two 8-bit numbers.
   (b)  What are pointers and index registers? Explain.

2  (a)  What is a recursive procedure? Write a recursive procedure to calculate the factorial of number N, where N is a two-digit Hexadecimal number.
   (b)  What are the loop instructions of 8086? Explain the use of DF flag in the execution of string instructions.

3  (a)  Draw the block diagram of 8257 & explain its interfacing to 8086 Microprocessor with a neat sketch.
   (b)  Draw and explain the memory read machine cycle in maximum mode.

4  (a)  Explain the functional diagram of 8279 keyboard and display controller.
   (b)  Discuss about DOS and BIOS interrupts.

5  (a)  Explain control word format of 8251.
   (b)  Define frame in asynchronous communication and draw it.

6  (a)  What is the difference between RET and IRET? Discuss the result, if RET instruction is placed at the end of the interrupt service routine.
   (b)  What is the vector address of type 50H interrupt?

7  (a)  Discuss briefly about serial communication modes in 8051.
   (b)  What are the steps involved in generating a time delay using mode 1 of timer?

8  (a)  Give the difference between RISC and CISC processor.
   (b)  Explain about the memory organization of ARM.

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