

Code: 9A04602

**R9**

B.Tech III Year I Semester (R09) Supplementary Examinations, May 2013

**MICROPROCESSORS & MICROCONTROLLERS**

(Common to CSS, IT and ECC)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Draw the block diagram of 8086 and explain each block.  
(b) Discuss the addressing modes provided by 8086 and explain with examples.
- 2 (a) Write an ALP in 8086 to exchange two blocks of 8 bit numbers using string instructions.  
(b) Write an ALP in 8086 to multiply two 8 bit numbers.
- 3 (a) Explain need and importance of DMA.  
(b) Discuss about static RAM and EPROM with reference to 8086.
- 4 (a) What is the use of key board and display controller?  
(b) Give the BSR mode format of 8255.
- 5 (a) What is simplex half and full duplex modes of communication?  
(b) What is the difference between asynchronous and synchronous mode of communication?
- 6 Draw the block diagram for multiple 8259A based interrupt system.
- 7 Draw the schematic for interfacing a stepper motor with 8051 microcontroller and write 8051 ALP for changing speed and direction of motor.
- 8 (a) Explain the advantages of ARM microcontroller with respect to programming events.  
(b) With an example brief out about the MCS-96 microcontrollers.

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