

Code No: **R32024****R10****Set No. 1****III B.Tech II Semester Supplementary Examinations, November - 2017****MICROPROCESSORS AND MICROCONTROLLERS**

(Electrical and Electronics Engineering)

Time: 3 hours**Max. Marks: 75****Answer any FIVE Questions****All Questions carry equal marks**

- 1 a) Discuss the Register Organization of 8086.
 b) Explain about memory segmentation and instruction queue.
- 2 a) Draw and explain read and write cycle timing diagrams.
 b) Discuss the addressing modes of 8086 microprocessor.
- 3 a) Explain the assembly language implementation of the following:
 i) FORLOOP ii) REPEAT iii) IF-THEN-ELSE iv) WHILE
 b) Discuss the importance of Assembly directives and their applications.
- 4 a) Explain the major components in 8255 internal architecture.
 b) Describe the operation of Stepper motor interfacing.
- 5 a) Explain the need for DMA data transfer?
 b) Discuss the operating modes of 8259 interfacing.
- 6 a) Mention the advantages of microcontroller than microprocessor.
 b) What is interrupt vector table of 8086? Explain its structure.
- 7 a) Discuss the instruction set of 8051 microcontroller.
 b) Discuss the assembly language programming of 8051 with one example.
- 8 a) Discuss the ADC and DAC interfacing with 8051.
 b) Elaborate the need of a dedicated keyboard display controller.
