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Roll No. | | | | | | | | | | | | | Total No. of Pages : 01

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M.Tech.(ECE) EL-1 (2016 Batch) (Sem.–2)

ADVANCED MICROPROCESSOR & EMBEDDED SYSTEMS

Subject Code : MTEC-204A

Paper ID : [74281]

Time : 3 Hrs. Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

Q1 Discuss the need of interrupts in microprocessor. Draw and Explain the Priority Interrupt controller 8259 interfaced with 8086 in cascade mode with suitable block diagram.

Q2 What is DMA? Explain its significance in microprocessor. Which hardware pins of 8086 are used for DMA control? Draw and explain the architecture of 8257 DMA controller interfaced with 8086.

Q3 Explain the memory organization of 8086 microprocessor. What is T state? Draw and explain the timing diagram of a typical memory read and write machine cycle in 8086.

Q4 a) What is assembler directive? Explain the following assembler directives with an example :

i) DW ii) ASSUME

b) Explain the following instructions with an example :

i) CMP ii) TEST

Q5 What is the importance of addressing mode in a microprocessor? Explain various possible addressing modes used in 80186 with suitable examples.

Q6 Explain the significance of I/O mapped I/O scheme in microprocessor. Draw and describe the interfacing of a D/A converter with 8086 microprocessor with neat block diagram.

Q7 What is the need of embedded system? Draw and explain an embedded controller with its suitable block diagram in detail.

Q8 What is stack? What are the advantage using stacks in microprocessor? Explain steps involved in a data transfer to or from the stack in 80186 with a suitable example.

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