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B.Tech.
(SEM V) ODD SEMESTER EXAMINATION 2015-16
MICROPROCESSOR & ITS APPLICATIONS

[Time: 3 hrs.]

[Max. Marks: 100]

Note- Attempt All Questions. All Questions carry equal marks:-

- Q1. Attempt any **four** questions from the following: [5x4=20]
- What is bus? What are different types of buses supported by 8085 microprocessor. Explain with suitable block diagram.
 - Discuss evolution of microprocessor with suitable diagram.
 - What is addressing mode .Explain various types of addressing modes supported in 8085 microprocessor.
 - What following instructions do in the 8085 microprocessor?
 - XCHG
 - MVI A, 9AH
 - DAD, D
 - LDA 850FH
 - What are the machine cycles in the 8085 microprocessor? Explain in brief.
 - Write short notes on:
 - Microprocessor
 - CPU
 - Minicomputer
 - Higher level language
- Q2. Attempt any **two** questions from the following: [10x2= 20]
- Draw the internal architecture of 8085 microprocessor. Explain each block with suitable diagrams.
 - Draw and explain the memory read timing diagram of the 8085 microprocessor.
 - What is flag? List its type. What is the structure of flag register? Explain each flag with an example.
- Q3. Attempt any **two** questions from the following: [10x2= 20]
- Draw and explain timing diagram of memory write cycle in 8086 maximum mode.
 - Draw pin diagram of 8086 microprocessor. Explain pins are associated with maximum mode.
 - Explain the following instructions with suitable examples. Also indicate the flag conditions.
 - DAA
 - RCR
 - MOVSW
 - AAA
- Q4. Attempt any **two** questions from the following: [10x2= 20]
- Draw flow chart and write program of addition of two 8-bit numbers with carry.
 - Draw the flow chart and write program to shift Right 8-bit number by 2 bits.
 - Subtract two 8-bit numbers without considering the borrow and also draw its flow chart.
- Q5. Attempt any **two** questions from the following: [10x2= 20]
- Explain 8255 PPI with suitable block diagram. Discuss its operating modes in brief.
 - What is DMA? Explain 8237 DMA controller with suitable diagram.
 - Draw and explain the architecture of 8253 programmable timer/counter.