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| <b>5E5042</b>   | Roll No. _____ | [Total No. of Pages : 2] |
|   | <b>5E5042</b>  |                          |
| <b>B.Tech. V Semester (Main&amp;Back) Examination, Nov./Dec. - 2017</b> |                |                          |
| <b>Electrical Engineering</b>   |                |                          |
| <b>5EE2A Microprocessors &amp; Computer Architecture</b>                |                |                          |

Time : 3 Hours

Maximum Marks : 80  
Min. Passing Marks : 26

**Instructions to Candidates:**

*Attempt any five questions, selecting one question from each unit. All Questions carry equal marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly). Units of quantities used/calculated must be stated clearly.*

**Unit - I**

1. a) Explain the following terms with respect to 8085 Microprocessor. (8)  
i) Address bus                      ii) Data bus                      iii) Control bus
- b) Describe the Architecture of 8085 Microprocessor. (8)

**OR**

1. a) Describe the memory organization? Also explain various types of Interrupts. (8)
- b) Explain the various types of Signals and Pins used in 8085 Microprocessor? (8)

**Unit - II**

2. a) What are Subroutines? How they are useful? (8)
- b) Explain MVI and LXI instructions using suitable example? (8)

**OR**

2. a) Explain the Classification of the instruction set of 8085 microprocessor with suitable example. (8)
- b) Write short note on Counters & Time delay. (8)

**Unit - III**

3. Explain the 8279 to be used with the 8085 microprocessor? (16)

**OR**

3. a) Draw and explain the block diagram of 8257 DMA controller? (8)  
b) Draw and explain the block diagram of 8155 multipurpose programmable device. How does it differ from 8255. (8)

**Unit - IV**

4. a) Give a brief discussion on Instruction set of 8086 microprocessor? (8)  
b) Explain Hardware and Software interrupts of 8086 microprocessor. (8)

**OR**

4. a) Explain the memory addressing and memory segmentation for 8086 Micro-processor? (8)  
b) Explain the Architecture of INTEL 8086? (8)

**Unit - V**

5. a) Explain the following types of memory- (8)  
i) Volatile and non volatile memory.  
ii) Virtual and physical memory.  
b) Write short note on :- (8)  
i) RD RAM  
ii) DD RAM

**OR**

5. a) Explain the central processing Unit with the help of diagram. Also explain its need and applications? (8)  
b) Write short notes on: (8)  
i) Different types of ROM  
ii) Memory Latency and Memory seek time

