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| EWULogo.png | | **EAST WEST UNIVERSITY** | |
| **Department of Computer Science and Engineering** | |
| **B.Sc. in Computer Science and Engineering Program** | |
| **Mid Term II Examination, Spring 2019** | |
| **Course:** | | **CSE442 – Microprocessor and Microcontroller, Section-2, Makeup exam** |  |
| **Instructor:** | | **Md. Nawab Yousuf Ali, PhD, Associate Professor, CSE Department** |  |
| **Full Marks:** | | **30 (20 mark will be counted for final grading)** |  |
| **Time:** | | **1 Hour and 20 Minutes** |  |
| **Note:** There are SEVEN questions, answer ALL of them. Course outcomes (CO), cognitive levels and marks of each question are mentioned at the right margin. | | | |
| 1. | Determine the actions of the following pins in Intel 8086 microprocessor when.   1. RD is logic 0 2. BHE is logic 1 3. ALE is logic 1 | | [CO2, C3, 3] |
| 2. | Design a ROM chip with all control signals having 1024 KB of memory location. | | [ CO2, C3, 3] |
| 3. | Identify the addresses, data and control inputs, latches and status pins for the following bus buffering of 8088 microprocessor. | | [ CO2, C3, 4] |
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| 4. | Design an interface between a memory 27128EPROM and Intel 8086 microprocessor using a NAND gate decoder. Calculate the memory location selected by the EPROM. Determine the actions of the control pins for reading data from EPROM chip. | | [CO2, C3, 7] |
| 5. | Design an address multiplexer for a DRAM with only 16 address inputs, where it should contain 32-the numbered required addressing 4GB memory locations. | | [ CO2, C3, 3] |
| 6. | Illustrate the segment and offset addresses for the following interrupt vectors. Determine their types and memory addresses.   1. Coprocessor error 2. 1-byte breakpoint 3. Invalid task state segment | | [ CO2, C3, 7] |
| 7. | Consider a software interrupt with BOUND instruction.  Write the outputs for the conditions in the box.  if (AX>(X+(X+1))) ; X is a one byte of a memory location  if (AX<((X+2) +(X+3))) | | [CO2, C3, 3] |
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*\*\*\*GOOD LUCK\*\*\**