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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, Fall 2017** | |
| **Course:** | | **CSE442 – Microprocessor and Microcontroller, Section-3** |  |
| **Instructor:** | | **Md. Nawab Yousuf Ali, PhD, Associate Professor, CSE Department** |  |
| **Full Marks:** | | **30 (15 mark will be counted for final grading)** |  |
| **Time:** | | **1 Hour and 20 Minutes** |  |
| **Note:** There are EIGHT questions, answer ALL of them. Course outcomes (CO), cognitive levels and marks of each question are mentioned at the right margin. | | | |
| 1. | Determine the activities of the following pins in 8088 microprocessor when   1. RD is logic 1 2. ALE is logic 0 3. DEN is logic 0 | | [CO1, C2, 3] |
| 2. | Determine the output of the following table for the status pins of 8086 processor   |  |  |  | | --- | --- | --- | | S3 | S4 | Output | | 0 | 0 |  | | 1 | 1 |  | | 1 | 0 |  | | 0 | 1 |  | | | [ CO1, C2, 3] |
| 3. | Determine the addresses, data and control inputs, latches and status pins for the following bus buffering of 8086 microprocessor. | | [ CO3, C3, 4] |
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| 4. | Design an interface between a memory 271024EPROM and Intel 8086 microprocessor using a NAND gate. Calculate the memory location for the EPROM. | | [CO3, C3, 5] |
| 5 | Design an address multiplexer with only 16 address inputs, where it should contain 32-the numbered required addressing 4GB memory locations. How does it work? | | [ CO3, C2, 5] |
| 6 | Determine the starting and ending vector addresses for the following interrupt.   1. Undefined opcode 2. INT 7 3. Invalid task state segment | | [ CO2, C2, 3] |
| 7. | Correct the program that sets the TRAP flag bit to enable trapping. Generate memory address when the SS=12FCH and BP=123DH  TROFF PROC INTERRUPT  PUSH AX  PUSH BP  MOV SP, BP  MOV AX, [BP+8]  AND AH, OFEH  MOV AX, [BP+8]  POP AX  POP BP  RET  TROFF ENDP | | [CO2, C3, 4] |
| 8. | Design an interface between Intel 8088 and an 8259A programmable interrupt controller. | | [CO3, C3, 3] |

*\*\*\*GOOD LUCK\*\*\**