# **ewuwebEAST WEST UNIVERSITY**

**Department of Computer Science and Engineering**

**Mid Term II Examination, Summer 2017**

**Course: CSE442 Microprocessor and Microcontroller, Make up**

**Instructor: Md. Nawab Yousuf Ali, PhD, Assoc. Professor, CSE Dept.**

**Full Mark: 30 (15 will be counted)**

# **Time: 1 Hour 15 Minutes**

**Date: July 12, 2017**

Answer all of the following questions.

Mark for each question is written on the right side. **Marks**

**Question 1. 4+4=8**

1. Explain the array data addressing in base-plus-indexed addressing mode? Define with diagram. [CO3]
2. How data 2791H is popped out from the stack? Explain with figure. [CO3]

**Question 2.**

1. Illustrate the pin outs of 8288 bus controller. [CO2] **4+3=7**
2. How do you differentiate between BHE and ALE pins in the 8086 microprocessor? [CO2]

**Question 3. 4+3=7**

1. Identify the signals and their functions provided by the 8288 bus controller used with 8086/8088 maximum mode operation. [CO3]
2. Define the bus connections on the 8088 microprocessor are typically demultiplexed. [CO3]

**Question 4. 5**

Design a circuit with 28 pins for a RAM chip and write down the functions of the pins in the diagram. [CO3]

**Question 5. 3**

Write an assembly language program by inserting a value into a register and check whether it is divisible by 17 or not. If divisible put 7 into DX register; if not divisible compare the remainder whether it is greater than or equal to 4; if so save 27 into DX else 37 into CX. [CO2]

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