**CSE-3105 (Microprocessors and Micro-controller)**

**Date: 07 May 2020**

**Topics of Lecture 03, Lecturer 04 and Lecture 05:**

1. What are the purposes of using AX, BX, CX and DX registers in 8086 microprocessor?

2. What are the pointer register and index register in 8086 microprocessor?

3. What are the segment and offset registers of 8086 microprocessors? Or, which registers work for segment and offset of 8086 microprocessor?

4. Which combinations are used for segment and offset (i.e., CS, DS, ES, SS and IP, BP SP, SI, DI) for the representation of program instruction, program data and stack data?

5. How can you calculate 20 bit physical address or effective address from 16 bit segment and 16 bit offset address? Explain with example.

6. How can you map 20 bit physical address into RAM through 16 bit segment and 16 bit offset address in 8086 microprocessor? Explain the working procedure.

7. Mathematical problems for calculating physical address, segment address and offset address.

8. How CS and IP are used to execute the program in 8086 microprocessor? Explain with example.

9. How various segments can be represented continuous, partially overlapped, fully overlapped and disjoint into RAM?

10. Why 8086 microprocessor can access only 1MB of RAM?

11. What are BIOS and DOS routine?

12. Explain the start-up operation of a PC.