



**Assignment # 02**  
**Microprocessor & Assembly Language**  
**BS (CS)**  
**Spring semester 2018**

- Q.1 The central processor unit (CPU) contains registers and what other basic elements?
- Q.2 The central processor unit is connected to the rest of the computer system using what three buses?
- Q.3 Why does memory access take more machine cycles than register access?
- Q.4 What are the three basic steps in the instruction execution cycle?
- Q.5 Which two additional steps are required in the instruction execution cycle when a memory operand is used?
- Q.6 What are the x86 processor's three basic modes of operation?
- Q.7 Name all eight 32-bit general-purpose registers.
- Q.8 Name all six segment registers.
- Q.9 What special purpose does the ECX register serve?
- Q.10 Describe SRAM and its most common use.
- Q.11 Describe VRAM.
- Q.12 List at least two features found in the Intel P965 Express chipset.
- Q.13 Name four types of RAM mentioned in this chapter.
- Q.14 What is the purpose of the 8259A PIC controller?
- Q.15 Of the four levels of input/output in a computer system, which is the most universal and portable?
- Q.16 What characteristics distinguish BIOS-level input/output?
- Q.17 Why are device drivers necessary, given that the BIOS already has code that communicates with the computer's hardware?
- Q.18 In the example regarding displaying a string of characters, which level exists between the operating system and the video controller card?
- Q.19 Is it likely that the BIOS for a computer running MS-Windows would be different from that used by a computer running Linux?