Assignment # 02

Microprocessor & Assembly Language

BS (CS)

Fall 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?