Assignment # 01
Microprocessor & Assembly Language
BS (CS)
Spring semester 2019

Q.1 What is the relationship between high-level language and machine language?

Q.2 Explain the concept of *portability* as it applies to programming languages.

Q.3 Give an example of an *embedded systems* application.

Q.4 What is a device driver?

Q.5 Why would a high-level language not be an ideal tool for writing a program that directly accesses a particular brand of printer?

Q.6 Translate the following C++ expression to assembly language, using the example presented earlier in this chapter as a guide: X = (Y * 4) + 3.

Q.7 In your own words, describe the *virtual machine* concept.

Q.8 What is the decimal representation of each of the following unsigned binary integer 11111000?

Q.9 What is the sum of binary integers 00001111 + 00001111?

Q.10 What is the hexadecimal representation of the binary number 1100 1111 0101 0111?

Q.11 What is the binary representation of the hexadecimal number E5B6AED7?

Q.12 What is the unsigned decimal representation of hexadecimal integer 3A?

Q.13 What is the 16-bit hexadecimal representation of signed decimal integer -26?

Q.14 Convert a 16-bit hexadecimal signed number 7F9B to decimal.

Q.15 What is the decimal representation of the signed binary number 10110101?

Q.16 Why was Unicode invented?

Q.17 What is the value of the Boolean expression (T ∧ F) ∨ T?

Q.18 Create a truth table to show all possible inputs and outputs for the Boolean function described by ¬(A ∨ B).