## COLLEGE OF Engineering – department of computer science

Quiz 1

Name:

I-Say if the following statements are True or False. Justify if false.

1. “How does a computer work?” is related to the architecture of the computer.

1. A processor interprets and executes instructions.
2. The registers of the CPU carry out the arithmetic operations of a computer.
3. The cost for the various classifications of systems ranges from than one dollar to ten of millions of dollars.
4. The second generation of computers replaced transistors by optimized vacuum tubes.
5. Moore’s law states that the density of transistors in an IC will double every 18 months.
6. The assembly language resides between the high-level language and the digital logic in the abstraction levels of modern computing systems.
7. A cloud computing platform is defined in terms of the services that it provides rather than its physical configuration.
8. The Von-neumann model is also known as the stored-program architecture.
9. The Von-neumann model is the only model used nowadays.
10. In the Von-neumann model only data are stored in the memory.
11. The Von-neumann execution cycle is also called the fetch-decode-execute cycle.
12. All binary numbers representing an unsigned number starts with 0
13. All binary numbers representing **even** unsigned numbers ends with 0

II-Binary and Decimal

1. Convert 125 to binary on 8 bits.
2. Represent -100 in binary using the signed-magnitude notation (on 10 bits).
3. Represent -100 in binary using the 2’s complement notation (on 10 bits).
4. Add the unsigned binary numbers 11111 + 00001 on 5 bits. Which flag the programmer will use to verify that the addition gives a correct result will? Is the result correct in this case?Why?