Institute of Statistical Studies and Researches
Department: Computer Science and information
Subject: CS500 Exam
Time: 1.5 Hours
Type Quiz (Winter 2014)

Q1- Let X= $(240.171875)_{10}$. Find the Value Of Xin :
a)Ternary   b)Binary   c)Octal   d)Hexadecimal   **(4 Marks)**

Q2- Find the result of the following arithmetic operations , and verify them in decimal :-
- a- 1111011.1101+1110.00011   (**4 marks)**
- b- 11101.0101+11011.01101
- c- 11100.001-111.0001
- d- 10101.001-1101

Q3- Assuming the represented n of the tow numbers $(20)_{10}$ and $(-20)_{10}$ in binary with 15 bits, we have the following cases: (3 marks)
- a) Signed – magnitude notation
- b) Signed – 1 'S complement notation

Q4- Obtain the decimal value of the binary number $(11111001.101)_2$ in case of :
- a) Signed – magnitude notation   **(2 marks)**
- b) Signed – 1's complement notation

Q5 – Answer the following :   (7 Marks)
- a- Let X=$(100111.001)_2$,Find the value Of X in decimal
- b- Let X=$(100111.001)_2$,Find the value Of X in Octal
- c- Let X=$(100111.001)_2$,Find the value Of X in Hexadecimal
- d- Let X=$(112211.2211)_3$,Find the value Of X in Binary
- e- Let X=$(112211.2211)_3$,Find the value Of X in Octal
- f- Let X=$(1443355.776)_8$,Find the value Of X in Hexadecimal
- g- Let X=$(ABE23.21E)_{16}$,Find the value Of X in Octal