CSE 451 CT-1

Date: 25.11.2013 Time: 30 minutes

Total Marks: 20 Student Id.:aaaaa aaaa

1. Assume a coding scheme revised MLT-3 which have signal with three levels and four transitions rule to move between the levels. 10
   * If the next bit is 0
     + Current level zero, no transition
     + Current level nonzero, next level opposite of the current level
   * If the next bit is 1
     + Current level nonzero, next level is zero
     + Current level zero, next level is the opposite of the last nonzero level.
2. Draw the state diagram for this scheme.
3. Given the following bit sequence generate the signal. Assume that the initial voltage level was nonzero.

Bit sequence: **10110101001001**

1. Let a multilevel scheme is 2B2T. 10
2. What are the values of m, B, n, & L?
3. If +V, 0, -V are the voltage levels write all the possible signal patterns and bit patterns? You can write +V as + and –V as –
4. Give the mapping from bit pattern to signal pattern. Will there be any redundant or extra signal patterns? If yes which of them you will not use in the conversion and why?