Test 1 (set B)

Subject : Digital Logic[CSC 1111]

Full Marks : 20

Pass Marks : 10

Attempt all questions :

1. Subtract the following using 10's complement.

   $(1000)_{10} - (1001)_{10}$

2. Convert the given binary number into Gray code and Excess-3 code.
   $(1010101)_2$
3. Convert the given decimal number in binary.
   -7/8
4. if A + B = 1 and A . B = 0 prove the given Boolean algebra.
   (A + C).(A' + B).(B+C) = B.C
5. State and prove the De-Morgan's theorem.
6. What are universal gates and why they are called universal gate? Show that NOR gate is universal gate.
7. Express the given function in Sum of Minterms and obtain the simplified Boolean expression for the given function using K-map.
   F(A,B,C,D) = A'C'D' + A'C'D + A'CD + A'CD' + AC'D + ACD + ACD'

Note : Preference will be given to those who use their own understanding with good logic.

Best of luck guys.