Enrollment No:-_____   Exam Seat No:-_____

C.U.SHAH UNIVERSITY
Summer-2015

Subject Code: 4TE03DEL1   **Subject Name: Digital Electronics**
Course Name: B.Tech (CE,EC)   Date: 7/5/2015
Semester:III   Marks: 70
                                                        Time:02:30 TO 05:30
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Instructions:
1) Attempt all Questions of both sections in same answer book/Supplementary.
2) Use of Programmable calculator & any other electronic instrument prohibited.
3) Instructions written on main answer book are strictly to be obeyed.
4) Draw neat diagrams & figures (if necessary) at right places.
5) Assume suitable & perfect data if needed.

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SECTION-I
Q-1 (a) What is gate ? Explain types of gate with truth table and diagram.   (7)

Q-2 (a) Prove that NAND and NOR GATE are universal gates with the help of diagram. (7)
     (b) what is complement ? Explain 1's and 2's complement with example.   (7)
                                   OR
   (a) What is POS and SOP ? Explain with suitable examples.   (7)
   (b) Explain Full adder with circuit diagram.   (7)

Q-3(a) Explain Excess-3 Code and generate Excess-3 Code for numbers 0-9   (7)
    (b)What is K'MAP ? Explain 2 variable and 4 variable K'MAP with example.   (7)
                                   OR
   (a) Design a combination circuits for full substractor   (7)
   (b) Explain binary to octal convertor (Decoder)with the help of diagram.   (7)

SECTION-II
Q-4 (a) Explain demultiplexer with suitable diagram   (7)

Q-5(a) What is Flipflop ? Explain Master Slave J-K Flip flop with truth table and diagram(7)
Q-5(b) What is Flipflop ? Explain S R Flip flop with truth table and diagram   (7)

                                   OR
   (a) Design octal to binary encoder.   (7)
   (b) Write a note on Register.   (7)
Q-6(a) Explain Binary ripple counter.   (7)
    (b) Explain 7's and 9's complement with example.   (7)
                                   OR
   (a) What is multiplexer? Explain with the help of diagram   (7)
   (b) Explain T flip flop with diagram and truth table.   (7)

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