Seat No_____

BSc.IT SEM-2 Examination –

Subject : Principles of Digital Electronics   **Time : 2.30 Hours**
Paper No :20⑤   **Subject Code: 20219**   **Marks:70**

Q – 1   1. What is Gate? Explain AND, OR and NOT gate in detail
       2. State and Prove Demorgan's Theorem.   07
                               OR
Q – 1   1.Implement Circuit and truth table for following Boolean function   07
       $F =[(A'B)' + (B'C)'] + AB'C'$
       2.Write a short note on Boolean Algebra   07

Q – 2   1.Implement circuit : $F(A,B,C) = ?(0,1,2,3,7)$ 07
       2.What is Universal Gate? Explain NAND gate as universal gate.   07
                               OR
Q – 2   1.Write a short note on SOP.   07
       2.Implement circuit using POS   07

X1	X2	F
0	0	0
0	1	0
1	0	1
1	1	0

Q – 3   1.Define : Comparator. Explain with example   07
       2.Explain Octal to Binary Encoder in detail   07
                               OR
Q – 3   1.Write a short note on Multiplexer   07
       2.Write a short note on IC Chip   07

Q – 4   1.Define Arithmetic circuit. Explain half subtractor in detail   07
       2.Write a short note on shifter   07
                               OR
Q – 4   1.Explain Binary adder in detail.   07
       2.Write a short note on half adder in detail   07

Q – 5   1.Write a short note on asynchronous counter   07
       2. Define : Latch and flip flop. Explain D flip flop in detail   07
                               OR
Q – 5   1.Explain JK and T Flip flop.   07
       2.What is Shift register? Give its types. Explain any one of them with example.   07