2022

BCA

[HONOURS]

(CBCS)

(B.Sc. First Semester End Examination-2022)

PAPER-C2P (Practical)

[Digital]

Full Marks: 20 ***Time: 02 Hrs***

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

Answer any one question **20X1=20**

1. Design and implement half adder using NAND gates.
2. Implement a 2-bit magnitude comparator.
3. Design and implement 4:1 Multiplexer..
4. Implement with circuit diagram and truth table the following boolean Expression. $E = \overline{A}\overline{B} + AB$
5. Implement XNOR gate using minimum number of NAND gates.
6. Design and implement a 8:3 encoder.
7. Design and implement a D flip flop.
8. Design and implement full subtractor using basic gates.

9. Implement a circuit for the following function -
   $f(A,B)=\pi(1,3,5,7)$
10. Implement a circut where output is same as the output of the following function - $f(A,B,C)=\sum(1,3,5.7)$
11. Design and implement Encoder.
12. Implement XNOR gate using minimum NOR gate.
13. Implement any Flip flop, tram their Group.
14. Design and implement Multiplexer..
15. Implement full subtractor and mention expremental result.
16. Implement the circut Diagram and truth table of the following expression $E=\overline{A}B+\overline{A}\overline{B}$ using NAND gate only.