B-2038

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SUBJECT CODE NO:- B-2038
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. F.Y. (Sem-I) Examination Oct/Nov 2019
Computer Science Paper-II   CS02
Digital Electronics

[Time: 1:30 Hours]   [Max. Marks: 50]

Please check whether you have got the right question paper.

N.B   1) Attempt all questions.
            2) Illustrate your answer with suitable diagram.

Q.1   a) What is gate? Explain AND & NAND gates with logical symbol.   10
        b) Explain full subtractor with suitable diagram.   10
                                        OR
        c) What is k-map? Explain k-map for 4 variables.   10
        d) Explain multiplexer with suitable diagram.   10

Q.2   a) Explain D & T-flip-flops with logical symbol.   10
        b) Explain Asynchronous counter with suitable diagram.   10
                                        OR
        c) Write short notes on any four of the following. Each carry 5 marks.   20
            1) Hexadecimal number system
            2) Binary parallel Adder
            3) JK flip-flop
            4) Parallel-in Parallel-out shift register
            5) Demultiplexer
            6) Ring counter

Q.3   Fill in the blank.   10
            1) $(1000)_2 = (------)_{10}$
            2) $(BC)_{16} = (------)_2$
            3) $A.B + A.C = A.(B + C)$ is called law of --------
            4) $A.\overline{A} = 0$ & $A + \overline{A} = 1$ are called laws of ----------
            5) $(110100)_2 = (------)_8$

            6) Y   is logical symbol of -------- gate?

            7) $(12)_{10} = (------)_2$

            8) $(1001)_2 + (1010)_2 = (------)_2$
            9) 2's complement of $(1011)_2$ is ---------
            10) In two input Ex-OR gate if both input is '1' then output is ----------

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