. KLS Gogte Institute of Technology

Department of Information Science & Engineering

**Internal Assessment- I**

Subject: Logic Design Code: 15CS32

Semester: III Max. Marks: 25

Date: 1-9-2016 Duration: 1 Hour

**Note: Answer all 5 questions for 25 Marks.**

1. Realize AND, OR and NOT by making use of NAND and NOR gates respectively. [L3, PO1]

2. Design a circuit that realizes following functions using suitable decoder [L6, PO2]

F 1(A, B, C) = A B C + A B C + A C

F 2(A, B, C) = (A + B + C) ( A+ B)

F 3(A, B, C) = A B C + A B C + A B C

3. Simplify the following Boolean expression by making use of K-map.

F(A,B,C,D)= π M (0,1,3,4,8,9,10,14,15) +d(5,11).

And construct the NAND-NAND circuit. [L3, PO2]

4. Simplify the following Boolean expression by making use of Quine-McClusky tabulation method

F (A, B, C) = A B C + A B C + A B C

And construct the logical circuit using basic gates. [L3, PO2]

5. Realize F(A,B,C,D)= ∑m (0,1,3,4,8,9,10,14,15) +d(5,11) by making use of 8:1 multiplexer. [L3, PO2] .

Staff In charge Stream Leader

Prof. S.B.Deshpande Prof. P.S.Upparmani

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