

# UNIT TEST 2B

## XI STANDARD

### COMPUTER SCIENCE

**TOTAL MARKS: 25****PART I****Choose the correct answers:****5 x 1 = 5**

1. NAND is the combination of \_\_\_\_  
a) NOR + AND      b) OR + AND      c) NOT + AND      d) All of these
2. Which of the following is a Distributive law?  
a)  $A \cdot (B + C) = (A \cdot B) + (A \cdot C)$       b)  $A \cdot (A + B) = A$   
c)  $A + (B \cdot C) = (A + B) \cdot (A + C)$       d)  $A + B = B + A$
3. True or False: The XNOR (exclusive - NOR) gate is a combination XOR gate followed by an inverter.  
a) True      b) False
4. Which of the following gate is not a universal gate?  
a) NAND      b) NOR      c) NOT      d) a and b
5. In Boolean algebra  $A + 1 =$  \_\_\_\_  
a) 1      b) 0      c) A      d) None of these

**PART II****Answers any three of the following questions:****3 x 2 = 6**

6. Write the Boolean function of AND and OR gate.
7. Write the De Morgan's Law in Boolean algebra.
8. Draw the logical circuit of Bubbled OR gate.
9. How NOR gates work?

**PART III****Answers any three of the following questions****3 x 3 = 9**

10. Tabulate the truth table of XOR and XNOR gates.
11. What is Logical inverter? Why?
12. Write the difference between AND and OR gates.
13. Draw the Logical circuit and Truth table of Bubbled AND gate.

**PART IV****Answers of the following questions:****1 x 5 = 5**

14. Explain the fundamental gates with expression and truth table.  
(OR)

How AND and OR can be realized using NAND and NOR gate.

MOHAMED FAKRUDEEN  
PGT-COMPUTER SCIENCE  
CHENNAI – "Vera Level Kalvi"