

## ECAT Computer Science Chapter 5 Boolean Algebra

Sr	Questions	Answers Choice
1	Pick up wrong logical expression	A. NOR gate B. EXCLUSIVE OR gate <b>C. EXCLUSIVE NOT gate</b> D. OR gate
2	If A and B are two 1-bit numbers, what logic gates will be required to test for A=B?	A. NOR gate B. EXCLUSIVE OR gate <b>C. EXCLUSIVE NOT gate</b> D. OR gate
3	Question Image	A. $x + y$
4	The logic device that perform Boolean multiplication is.	A. AND gate B. OR gate C. Inverter D. None of these
5	Boolean <u>expression</u> for NOR gate with <u>two inputs</u> x and y can be written as.	A. $\neg(x \vee y)$ B. $x \cdot y$ C. $\neg(x + y)$
6	The half adder circuit has	A. one input <b>B. two inputs</b> C. three inputs D. always more than two inputs
7	According to Boolean algebra $x + 1 =$ _____	A. 0 <b>B. 1</b> C. x
8	Boolean algebra is also known as.	A. logical algebra B. control algebra <b>C. switching algebra</b> D. programming algebra
9	Question Image	A. $A + B + C + D$ B. $A + B + C \cdot D$ C. $\neg(A + B + C + D)$ D. $\neg(A + B + C \cdot D)$
10	Which of the following operations are used by Boolean algebra.?	A. Boolean addition B. Boolean multiplication C. Boolean complementation <b>D. All of the above</b>
11	Odd parity of a word can be conveniently tested by.	A. OR gate <b>B. XOR gate</b> C. NOR gate D. NAND gate
12	The number of inputs to full adder are	A. 1 B. 2 <b>C. 3</b> D. 4
13	Which of the following gate is two level logic gate.	A. OR gate B. AND gate <b>C. EXCLUSIVE OR gate</b> D. NAND gate
14	Question Image	A. $x \cdot y$ B. $\neg(x + y)$ C. $\neg(x \cdot y)$ D. $x \cdot y$
15	Question Image	A. 0 B. 1 <b>C. x</b>
16	An AND gate will function as OR if.	A. all the inputs to the gates are "1" B. all the inputs are "0" C. a Not gate is added to it <b>D. all the inputs and outputs are complemented</b>
17	The 'Boolean Algebra' is based on the premise that	A. there are two states B. differential equations can be solved by analog circuits.

C. either a statement is true or false  
D. arithmetic operations can be carried out

18 According to Idempotent law,  $x + y = \underline{\hspace{2cm}}$

A. 1  
B. 0  
C. x  
D.  $x \cdot x$

19 Boolean description for the exclusive OR gate for two inputs x and y can be written as.

A.  $x + y$   
B.  $x \cdot y$   
C.  $x \cdot y + x \cdot y$   
D.  $x \cdot y + x \cdot y$

20 The heart of analog to digital converter (ADC) is

A. comparator  
B. pulse generator  
C. voltage source  
D. current source