



ST. LAWRENCE HIGH SCHOOL

A Jesuit Christian Minority Institution



WORKSHEET - 23 (ANSWER KEY)

Topic – SOP and POS

Subject: COMPUTER SCIENCE

Class - 11

F.M:15

Chapter: Boolean Algebra

Date: 17/08/2020

Choose the correct answer for each question:

[5 X 1 = 15]

- The terms in SOP are called _____.
 - max terms
 - min terms**
 - mid terms
 - sum terms
- A sum of products expression is a product term (min term) or several min terms ANDed together.
 - True
 - False**
- Which of the following is an incorrect SOP expression?
 - $x+x.y$
 - $(x+y)(x+z)$**
 - x
 - $x+y$
- The corresponding min term when $x=0$, $y=0$ and $z=1$.
 - $x.y.z'$
 - $x'+y'+z$
 - $x+y+z'$
 - $x'.y'.z$**
- The expression $A+BC$ is the reduced form of _____.
 - $AB+BC$
 - $(A+B)(A+C)$**
 - $(A+C)B$
 - $(A+B)C$
- The number of min terms for an expression comprising of 3 variables?
 - 8**
 - 3
 - 0
 - 1
- The terms in POS are called _____.
 - max terms**
 - min terms

- c) mid terms
 - d) sum terms
8. Which operation is shown in the following expression: $(X+Y')(X+Z).(Z'+Y')$
- a) NOR
 - b) ExOR
 - c) SOP
 - d) **POS**
9. The expression $Y=AB+BC+AC$ shows the _____ operation.
- a) EX-OR
 - b) **SOP**
 - c) POS
 - d) NOR
10. A product term containing all K variables of the function in either complemented or uncomplemented form is called a _____
- a) **Minterm**
 - b) Maxterm
 - c) Midterm
 - d) Σ term
11. The expression $Y=(A+B)(B+C)(C+A)$ shows the _____ operation.
- a) AND
 - b) **POS**
 - c) SOP
 - d) NAND
12. Canonical form is a unique way of representing _____
- a) SOP
 - b) Minterm
 - c) **Boolean Expressions**
 - d) POS
13. There are _____ maxterms for 3 variables (a, b, c).
- a) 0
 - b) 2
 - c) **8**
 - d) 1
14. A variable on its own or in its complemented form is known as a _____
- a) Product Term
 - b) **Literal**
 - c) Sum Term
 - d) Word
15. The canonical sum of product form of the function $y(A,B) = A + B$ is _____
- a) $AB + BB + A'A$
 - b) **$AB + AB' + A'B$**
 - c) $BA + BA' + A'B'$
 - d) $AB' + A'B + A'B'$