Find out minimize expression for following function.

$$f = AB\bar{C} + ABC + \bar{A}BC$$

A. $AB + BC$

B. $A\bar{C} + \bar{A}B$

C. $BC + \bar{A}B$

D. $\bar{A}B + B\bar{C}$

$\underline{AB\bar{C} + ABC} + \underline{\bar{A}BC + ABC}$

$AB[\bar{C} + C] + BC[\bar{A} + A]$

$\underline{AB + BC}$

Q.2

Find out minimize expression for following function.

$$f = AB + A\bar{B} + \bar{A}\bar{B}$$

A. $\bar{A} + B$

B. $A + \bar{B}$

C. $\bar{A} + \bar{B}$

D. $A + B$

$A\left[B + \bar{B}\right] + \bar{A}\bar{B}$

$A + \bar{A}\bar{B}$

$(A + \bar{A})(A + \bar{B})$

$A + \bar{B}$

Q.3 Find out minimize expression for following function.

$$f = (A+B)(A+\bar{B})(\bar{A}+B)(\bar{A}+\bar{B})$$

A. 1

B. $\bar{A}\bar{B}$

C. 0

D. $A\bar{B}$

By two Variable

$$moxterm = 2^2 = 4$$

$$= 0$$

Q.4

Find out minimize expression for following function.

$$f = (A + B + C)(A + B + \bar{C})$$

A. $(A + C)B$

B. $A + B$

C. $AB\bar{C}$

D. $A(B + C)$

$A + B = x$

$f = (x + c)(x + \bar{c})$

$= x + c \cdot \bar{c}$

$= x$

$= A + B$

$P + QR = (P + Q)(P + R)$

Distribution
Theorem

Q.5

The Boolean expression

$$f = (X+Y)(X+\bar{Y}) + \overline{\overline{X}\overline{Y}} + \overline{X}$$

$$\underbrace{(X+Y)(X+\bar{Y})}$$

A. Y

B. X

C. $\overline{X}\overline{Y}$

D. $X+\bar{Y}$

$$X + Y\cdot\bar{Y} = X$$

$$f = X + \overline{\overline{X}\overline{Y} + \bar{X}}$$

$$X + \overline{\bar{X}[\bar{Y}+1]}$$

$$X + \overline{\overline{X}} = X + X = \boxed{X}$$

Q.6 The logic expression $f = X + \bar{X}Y$
Is equivalent to

A. $X + Y$

B. XY

C. $\bar{X} + Y$

D. $X + \bar{Y}$

$= (X + \bar{X})(X + Y)$

$X + Y$

Q.7 The logic expression $f = (A+B)(A+C)$

Is equivalent to

$$A + BC = (A+B)(A+C)$$

Distribution Theorem

A. $A + BC$

B. $B + AC$

C. $C + AC$

D. $\bar{A} + BC$

Q.8 The Boolean expression $f = (1 + \bar{A})(B + AC)$ is equivalent to

$= 1 \cdot (B + AC)$

$= AC + B$

A. $AC + B$

B. $\bar{A}C + B$

C. $\bar{A} + BC$

D. 1

Q.9

Find minimization expression

$$f = (A + \bar{A}) + (BC + AC)(A + D)$$

A. 1

B. 0

C. $AB + CD$

D. $ABC + BCD + ACD$

$$f = 1 + \{[BC + AC] \cdot \{A + D\}\}$$

1 + anything = 1

Q.10 Find out minimization $f = (A+B)(A+B+C)$

A. $B + C$

B. $A + B$

C. $A + B + C$

D. $AB + BC + AC$

$$= A \cdot A + AB + AC + AB + B + BC$$

$$= \underline{A + AB + AC} + \underline{AB + B + BC}$$

$$= A[1 + B + C] + B[1 + A + C]$$

$$= \boxed{A + B}$$

A^0

THANK YOU GW SOLDIERS !