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**SEMCOM**

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Subject: Business Mathematics-I (Assignment).

Class: BBA (Sem-I)

**Q.1**

- (A) Let  $A = \{1, 2, 5, 6, 9\}$ ,  $B = \{2, 4, 6, 8\}$  &  $C = \{2, 4, 5, 8\}$  then state and verify Distributive laws.
- (B) If  $A = \{1, 3, 5\}$ ,  $B = \{2, 4, 6, 8\}$ , and  $U = \{x: x \leq 10, x \in N\}$  then verify De Morgan's laws.
- (C) (i) Solve:  $|x + 2| = 1$   
(ii) Express the following inequalities in a Modulus form:  $-1 < x < 8$

**Q.2**

(A) If  $A = \begin{bmatrix} 1 & 3 & 2 \\ 3 & 1 & 2 \\ 2 & 4 & 1 \end{bmatrix}$ ,  $B = \begin{bmatrix} 1 & -2 & 3 \\ 2 & 3 & -1 \\ -3 & 1 & 2 \end{bmatrix}$  and  $C = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 1 & 2 \\ 1 & 2 & 0 \end{bmatrix}$

Then find 1.  $A + C$     2.  $A - B$     3.  $A - B + 2C$

(B) If  $A = \begin{bmatrix} 9 & 2 & 5 \\ 7 & 6 & 10 \\ 7 & -2 & -1 \end{bmatrix}$  and  $B = \begin{bmatrix} 1 & 2 & 0 \\ 1 & 1 & 0 \\ -1 & 4 & 0 \end{bmatrix}$ , then find a matrix X such that  
 $X + (A - B) = \frac{1}{2}(X + A)$ .

- (C) Define determinant of order 2 & Solve the following equations by using Cramer's rule:  
 $5(x - 1) + 3y = 0$   
 $7x + 2(y + 2) = 0$