***BusMath-(20 marks)-Online-1st Sem-April-2022-GoogleForms***

(1) Two Matrices A & B are said to be confirmable for the multiplication A × B, iff

The number of rows in A is equal to the number of columns in B.

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Both (a) and (c) are correct.

(2) If A is a skew symmetric matrix then

(a) A = $A^T$

(b) –A = $A^T$

(c) A = - $A^T$

(d) Both (b) & (c) are true.

(3) If rows and columns of a determinant are interchanged then the value of the determinant will

Remain unaltered

Be zero

Be changed

None of these

(4) If the value of the determinant of a square matrix is zero then we call that matrix as-

Symmetric matrix

Non-singular matrix

Singular matrix

None of these

(5) In order to add two matrices which of the following conditions is necessary?

They must be square matrices

The dimensions must be equal

The determinants must be non-zero

None of these

(6) If $f(x) = 2x^2+3x+2$ , the $f(-3)$ is –

(a) -24

(b) 10

(c) 11

(d)-11

(7) Limit of a function exists at a point if and only if

the left hand or right hand limits exist

both the left and right hand limits exist and are equal.

the left and right hand limits are equal.

None of these

(8) If a function can be expressed directly in terms of the independent variable, then we call it as

Implicit function

Explicit function

Imaginary function

None of the these

(9) In a function, the set of values taken by the independent variable is known as:

Range

Domain

Co-domain

None of these

(10) If $f(-x) = f(x)$ then

$f(x)$ is said to be an even function of x

$f(x)$ is said to be an odd function of x

$f(x)$ is said to be an explicit function

$f(x)$ is said to be an implicit function

(11) Find the cofactors of the elements $a_{11}$ & $a_{23}$ of the determinant $\begin{vmatrix} 4 & -3 & 2 \\ 5 & 1 & 7 \\ 2 & 0 & 3 \end{vmatrix}$.

-3 and -6

3 and -6

-3 and 6

3 and 6

(12) Evaluate $\begin{vmatrix} 2 & 3 & 4 \\ -1 & 6 & 7 \\ 1 & -2 & 3 \end{vmatrix}$

-78

110

18

78

(13) A function $f(x) = \frac{x^2+1}{2x^3}$ is a

(14) Evaluate: $\lim_{x \to 2}(x^2 - 5x + 6)$

(15) Evaluate: $\lim_{x \to 1} \frac{x^2-7x+6}{x^2-4x+3}$