

Note: There are three sections in this paper i.e A, B & C.

**VERSION: B**

Instructions:

- Please attempt Section-A on the MCOs Answer Sheet only.
- Only black ball point or marker may be used for shading the relevant circle.
- Please make sure that there is no cutting, over writing, erasing, or multiple circles shading.

Time Allowed: 20 Minutes

**“Section – A”**

Marks: 15

Q.1. Choose the correct option i.e A, B, C or D.



- $(m - 3n)^3 =$   
 (A)  $\frac{m^3+9n^3+9mn}{(m+3n)}$  (B)  $\frac{m^3+9n^3+9mn}{(m-3n)}$  (C)  $\frac{m^3-9n^3-9mn}{(m-3n)}$  (D)  $\frac{m^3-9n^3+9mn}{(m+3n)}$
- The factorization of  $u^2 - 6uv + 9v^2$  is  
 (A)  $(u - 3v)(u - 3v)$  (B)  $(u + 3v)(u + 3v)$  (C)  $u(u - 6v) + 9v^2$  (D)  $u^2 - 3v(2u - 3v)$
- If C and D are any two polynomials and their LCM is L, then their HCF =  
 (A)  $\frac{L}{CxD}$  (B)  $\frac{CxD}{L}$  (C)  $\frac{C}{L}$  (D)  $\frac{D}{L}$
- The solution of linear equation  $2x + 5 = x - 3$  is:  
 (A) -8 (B) -8 (C) 1 (D) -1
- If  $A = \{5,4\}$  and  $B = (2,3)$ , then which of the following is ordered pair of  $A \times B$ ?  
 (A)  $\{(2,5), (3,4)\}$  (B)  $\{(5,4), (2,5)\}$  (C)  $\{(5,2)\}$  (D)  $\{(2,4)\}$
- Which of the following elements represent one of the columns of matrix  $\begin{bmatrix} 11 & 9 & 7 \\ 6 & -5 & 4 \\ 5 & 6 & 3 \end{bmatrix}$   
 (A) 11, 9, 7 (B) 5, 6, 3 (C) 11, 5, 3 (D) 7, 4, 3
- Which of the following two matrices are equal  
 $S = \begin{vmatrix} 7 & 9 \\ 1 & 8 \end{vmatrix}$   $T = \begin{vmatrix} 3+5 & 3+6 \\ 1 & 8 \end{vmatrix}$   
 $U = \begin{vmatrix} 3+6 & 4+6 \\ 1 & 8 \end{vmatrix}$   $V = \begin{vmatrix} 3+4 & 3+6 \\ 1 & 8 \end{vmatrix}$   
 (A) S and T (B) T and U (C) S and V (D) U and V
- Which of the following is a diagonal matrix?  
 (A)  $\begin{vmatrix} 1 & 2 \\ 4 & 4 \end{vmatrix}$  (B)  $\begin{vmatrix} 1 & 0 \\ 0 & 4 \end{vmatrix}$  (C)  $\begin{vmatrix} 0 & 2 \\ 4 & 4 \end{vmatrix}$  (D)  $\begin{vmatrix} 1 & 2 \\ 0 & 4 \end{vmatrix}$
- If  $A = \begin{vmatrix} 11 & 2 \\ -3 & -4 \end{vmatrix}$  and  $B = \begin{vmatrix} 1 & 7 \\ 5 & -8 \end{vmatrix}$  then  $A-B$  is equal to:  
 (A)  $\begin{vmatrix} 12 & 9 \\ 8 & 12 \end{vmatrix}$  (B)  $\begin{vmatrix} 10 & -5 \\ -8 & 4 \end{vmatrix}$  (C)  $\begin{vmatrix} 11 & 14 \\ 15 & 28 \end{vmatrix}$  (D)  $\begin{vmatrix} 10 & 5 \\ 2 & -4 \end{vmatrix}$
- The rational number  $\frac{2}{15}$  can be expressed as:  
 (A) 0.333... (B) 1.333... (C) 0.1333... (D) 0.0333
- $\frac{3}{25}$  can be expressed in radical form as:  
 (A)  $\sqrt[3]{25}$  (B)  $\sqrt[3]{2}$  (C)  $\sqrt[5]{2}$  (D)  $\sqrt[3]{2}$
- If  $z = 11 + 9i$  the conjugate of  $z$  is:  
 (A)  $-11 - 9i$  (B)  $-11 + 9i$  (C)  $11 - 9i$  (D)  $11 + 9i$
- $3.21 \times 10^4$  can be written in standard form as:  
 (A) 3210 (B) 32100 (C) 321000 (D) 3210000
- Which of the following is the base of Common logarithm?  
 (A)  $e$  (B)  $G$  (C) 10 (D)  $e$
- Which of the following is a polynomial?  
 (A)  $6x^4 + 3x^3 + 3$  (B)  $6x^4 + 3x^3 + 4$  (C)  $6x^4 + 3x^{-3} + 4$  (D)  $6x^4 + 3x^{-3} + 3$