Section-A

Multiple Choice Questions (MCQ's)

Choose the correct answer for each from the given options:

The sequence of the first 100 natural numbers which are divisible by "5" will _____.

(a) G.P (b) H.P (c) A.P (d) None of these

The sum of first n' odd natural are:

(a) n (b) n^2 (c) n (n + 1) (d) $\frac{n(n+1)}{2}$

If O (AUB) = 52, O(A), = 47, O(B) = 39 then $O(A \cap B)$ - _____

(a) 33 (b) 86 (c) 32 (d) 139

The sum of the roots of $(a - b)x^2 - (b - a)x - co = 0$ is _____.

(a) 0 (b) 1 (c) -1 (d) $\frac{-c}{a-b}$

The number of circular permutations of 4 beads arranged in a circle is _____.

(a) 3 (b) 4 (c) 5 (d) 6

If ω be cube roots of unity then $\omega^{\cdot} + \omega^{\cdot} + \omega^{\cdot} =$ _____

(a) -1 (b) 0 (c) 1 (d) 3

The factorial of positive integer 'n' is _____.

(a) n (n -1)..3, 2, 1 (b) n(n – 2)!

(c) n (n – 1) (n – 2) (d) all are true

$2 \sin 30° \operatorname{cose} 45° =$ _____

(a) $\frac{1}{2}$ (b) $\frac{2}{2}$ (c) 1 (d) None of these

$\frac{}{}$ radians is equal to _____angles

(a) 2 rights (b) 3 rights (c) 4 rights (d) None of these

There are 10 balls of different colours. In _____ ways can 7 if tgen si as to include one red ball.

(a) 82 (b) 84 (c) 85 (d) 86

$\sin 2\theta =$ _____.

(a) 2 sin θ (b) 2 sin θ cos θ

$-\cos^2 \theta$ (d) None of these

If tan θ = a, then sin θ= _____-.

(a) $\frac{a^2+1}{a}$ (b) $\frac{a^2+1}{a^2}$ (c) $\frac{a}{a^2+1}$ (d) None of these

The expansion of $\begin{pmatrix} a & 2 \\ 2 & a \end{pmatrix}$ will contain _____ terms.

(a) Single (b) 6 (c) 5 (d) 7

If $^{n+1}C_3 = 2, {}^nC_2$ then n = _____.

(a) 3 (b) 4 (c) 5 (d) 6

Additive inverses of 3 + 5i is _____

(a) -3 – 5i (b) 3 – 5i (c) -3 + 5i (d) – 5i

(16) A complete revolution is measurement of an arc of circle is equal to its _____.

(a) radius (b) diameter (c) circumference (d) None of these

(17) Solution of six x + cosx = 0 is _____

(a) $\left\{\frac{2\pi}{3}, n\pi\right\}$ (b) $\left\{\frac{3\pi}{3}, n\pi\right\}$ (c) $\left\{\frac{\pi}{4}, n\pi\right\}$ (d) None of these

(18) Which of the following is the roots of sec x = 2 :

(a) $\frac{\pi}{4}, \frac{\pi}{4}$ (b) $\frac{:}{4}, \frac{3\pi}{4}$ (c) $\frac{2\pi}{4}, \frac{5\pi}{4}$ (d) $\frac{\pi}{3}, \frac{\pi}{4}$

(19) $\frac{-3+I}{-3i}$ _____.

(a) $\frac{3}{10}$ (b) $\frac{10}{3}$ (c) 10 (d) None of these

(20) If $^nP_2 = 30$, then n = _____

(a) 4 (b) 5 (c) 6 (d) 12

(21) If $A \cap B = B$ then which one is true:

(a) $A \cup B = B$ (b) $A \subset B$ (c) $B \subset A$ (d) None of these

(22) If for a quadratic equation the discriminate b2 – 4ac < O, then roots are _____.

(a) Complex and un-equal (b) Equal and real (c) Real and un-equal (d) None of these

(23) If $Z_1 = 2 - 3i$ and $Z_2 = 2 - 7i$ then Re $(Z_1 + Z_2)$ is _____

(a) -2 (b) 2 (c) -4 (d) 4(

(24) The general term is expansion of (a + b) m is, form m > r:

(a) $T_{r+1} = C_r^m b_r$ (b) $T_{r-1} = C_r^m a^{m-r} b^r$

(c) T_{r+1} Crmarbm^r (d) None of these