

Note: - You have four choices for each objective type question as A, B, C and D. The choice which you think is correct; fill that circle in front of that question number in your answer book. Use marker or pen to fill the circles. Cutting or filling up two or more circles will result no mark.

SECTION-A

Q.1	Questions	A	B	C	D
1.	If $\sin \theta = \frac{1}{2}$, $0 < \theta < \frac{\pi}{2}$ then $\cos \theta =$ _____	$\frac{\sqrt{3}}{2}$ ✓	$-\frac{\sqrt{3}}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$
2.	$\sin 5\theta + \sin 3\theta$ is equal to	$2 \cos \theta \sin \theta$	$-2 \cos 4\theta \sin \theta$	$-\cos 4\theta \cos \theta$	$2 \sin 4\theta \cos \theta$
3.	Domain of $\sin x$ is	$[-1, 1]$	$[-\frac{\pi}{2}, \frac{\pi}{2}]$	✓ $\mathbb{R}$	$(-1, 1)$
4.	A fair coin is tossed then probability of head is	1	$\frac{1}{2}$ ✓	2	$\frac{1}{3}$
5.	Number of terms in the expansion of $(1+x)^{2n+1}$ is	$2n+1$	$2n$	$2n+2$ ✓	$3n+1$
6.	Second term in the expansion of $(1-\frac{1}{3}x)^{-1}$ is	$\frac{1}{3}x$ ✓	$-\frac{1}{3}x$	$3x$	$\frac{1}{3}$
7.	For a Complex number $(0, 1)^2 =$ _____	$(1, 0)$	$(-1, 0)$ ✓	$(0, 1)$	$(0, -1)$
8.	Tabular form of the set $\{x \mid x \in Q \wedge x^2 = 2\}$ is	$\{-2, 2\}$	$\{-\sqrt{2}, \sqrt{2}\}$	$\{ \}$ ✓	$\sqrt{2}$
9.	If A is a matrix of order 3×2 then order of $A'A$ is	3×3	3×2	2×3	2×2 ✓
10.	If all three sides of a triangle are given then to solve the triangle we use	Hero's Formula	Law of Sine	Pathagor's Theorem	Law of Cosine
11.	Circumradius R is given by	$\frac{b}{2 \sin \gamma}$	$\frac{a}{2 \sin \beta}$	$\frac{c}{2 \sin \alpha}$	$\frac{b}{2 \sin \beta}$ ✓
12.	Range of $\sin^{-1} x$ is	$-\frac{\pi}{2} \leq x \leq \frac{\pi}{2}$ ✓	$0 \leq y \leq \pi$	$-\frac{\pi}{2} < x < \frac{\pi}{2}$	$0 \leq x < 2\pi$
13.	If $\sin x = \frac{1}{2}$, $x \in [0, 2\pi]$ then x is equal to:	$\frac{\pi}{6}, \frac{5\pi}{6}$	$-\frac{\pi}{6}, \frac{5\pi}{6}$	$\frac{\pi}{6}, \frac{5\pi}{6}$ ✓	$\frac{\pi}{3}, \frac{2\pi}{3}$
14.	If $A = \begin{bmatrix} i & 1+i \\ 1 & -i \end{bmatrix}$ then $ A =$ _____	0	1	i	✓ -i
15.	Sum of roots of equation $ax^2 - bx + c = 0$ is	$\frac{b}{a}$ ✓	$\frac{c}{a}$	$-\frac{b}{a}$	$\frac{a}{b}$
16.	Roots of equation $x^2 - x - 2 = 0$ are	$2, -1$ ✓	$-2, 1$	$-2, -1$	$2, 1$
17.	A relation in which equality is true for all values of unknown is called	Equation	Identity ✓	Algebraic equation	Algebraic Relation
18.	Sum of n terms of an A.P is	$\frac{n}{2} \{2a + (n+1)d\}$	$\frac{n}{2} \{a + (n-1)d\}$	$\frac{n}{2} \{2a + (n-1)d\}$ ✓	$\frac{n}{2} \{a - (n-1)d\}$
19.	$\sum_{k=1}^n k^3$ equal	$\frac{n(n+1)}{2}$	$\frac{n^2(n+1)^2}{4}$ ✓	$\frac{n(n+1)(n+2)}{6}$	$\frac{n(n+1)(2n+1)}{6}$
20.	If ${}^nC_6 = {}^nC_8$ then n is equal to:	6	8	2	✓ 14

Cancelled