

Objective
Paper Code
6195

Intermediate Part First

MATHEMATICS (Objective) Group – I

Time: 30 Minutes

Marks: 20



Q.No.1

You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill the relevant circle in front of that question number on computerized answer sheet. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero marks in that question. Attempt as many questions as given in objective type question paper and leave other circles blank.

S.#	Questions	A	B	C	D
1	Solution of $1 + \cos x = 0$ is:	$\frac{\pi}{2}$	π	2π	$\frac{3\pi}{4}$
2	$\cos^{-1}(-x) = :$	$-\cos^{-1}x$	$\cos^{-1}x$	$\pi - \cos^{-1}x$	$\frac{\pi}{2} - \cos^{-1}x$
3	With usual notation $r_3 = :$	$\frac{\Delta}{s-b}$	$\frac{\Delta}{s-a}$	$\frac{\Delta}{s-c}$	$\Delta^2(s-c)$
4	For a triangle with a, b, c and α, β, γ as measures of sides and opposite angles respectively, then $b^2 + c^2 - 2bc \cos \alpha = :$	a^2	b^2	c^2	Δ^2
5	The period of $\sin \frac{x}{2}$ is:	2π	4π	π	3π
6	$\cos\left(\frac{3\pi}{2} + \theta\right) = :$	$\cos \theta$	$-\cos \theta$	$-\sin \theta$	$\sin \theta$
7	The vertex of an angle in standard form is at:	$(1, 0)$	$(0, 1)$	$(1, 1)$	$(0, 0)$
8	The sum of odd coefficients in the expansion $(1+x)^n$ is:	n^2	2^{n-1}	2^n	2^{n-2}
9	$n! > n^2$ is true for:	$n < 1$	$n < 2$	$n < 3$	$n \geq 4$
10	With usual notation nC_r equals:	${}^nC_{r-n}$	nC_n	${}^nC_{n-r}$	${}^{n-r}C_n$
11	$0! =$	0	1	-1	2
12	$\sum_{k=1}^n k =$	$\frac{n(n+1)}{6}$	$\frac{n(n+1)}{4}$	$\frac{n(n+1)}{2}$	$n(n+1)$
13	If in an A.P., $a_n = \frac{(-1)^{n-1}n}{2n+1}$, then a_4 equals:	4	3	$\frac{4}{3}$	$-\frac{4}{9}$
14	Types of rational fraction are:	3	2	4	1
15	If α, β are the roots of the equation $x^2 - 4x + 5 = 0$, then $\alpha\beta$ equals:	5	-4	2	4
16	The polynomial $ax^3 + bx^2 + 8$ has degree:	8	3	$a+b$	5
17	If A and B are non-singular matrices then $(AB)^{-1}$ equals:	$A^{-1}B^{-1}$	$\frac{1}{AB}$	$B^{-1}A^{-1}$	$(BA)^{-1}$
18	If A is a matrix of order 3×2 then A^1A is of order:	3×3	2×3	2×2	3×2
19	The number of subsets of a set of 4-elements is:	16	8	4	6
20	For $a, b \in \mathbb{R}$, either $a > b$ or $a = b$ or $a < b$ is the:	Trichotomy property	Left distributive property	Right distributive property	Cancellation property