

Roll No. _____

MATHEMATICS
Time: 30 Minutes

Intermediate Part-I, Class 11th (1st A 323- II) PAPER: I GROUP: II
OBJECTIVE
Code: 6194
Marks: 20

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. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

- 1- 1- $3 + 5 + 7 + \dots + (2n+5) = (n+2)(n+4)$ for integral values of n
(A) $n \geq -4$ (B) $n \geq -3$ (C) $n \geq -2$ (D) $n \geq -1$
- 2- Which one is true
(A) G, H, A are in G.P. (B) A, G, H are in G.P.
(C) A, G, H are in H.P. (D) A, G, H are in A.P.
- 3- Reference angle of $2\sin x - 1 = 0$ is
(A) $\frac{\pi}{3}$ (B) $\frac{\pi}{4}$ (C) $\frac{\pi}{6}$ (D) $\frac{\pi}{2}$
- 4- $\cos \frac{\beta}{2} =$
(A) $\sqrt{\frac{s(s-b)}{ac}}$ (B) $\sqrt{\frac{(s-c)(s-a)}{ac}}$
(C) $\sqrt{\frac{s(s-a)}{bc}}$ (D) $\sqrt{\frac{(s-b)(s-c)}{bc}}$
- 5- Range of $y = \sin x$ is
(A) $[-1, 1]$ (B) $[-\frac{1}{2}, \frac{1}{2}]$ (C) $[-2, 2]$ (D) $[-\frac{\pi}{2}, \frac{\pi}{2}]$
- 6- $\cot^2 \theta - \operatorname{cosec}^2 \theta =$
(A) 1 (B) -1 (C) $\cos^2 \theta$ (D) $\tan^2 \theta$
- 7- A square matrix $A = [a_{ij}]$ is lower triangular if
(A) $a_{ij} \neq 0$ for all $i < j$ (B) $a_{ij} \neq 0$ for all $i > j$
(C) $a_{ij} = 0$ for all $i > j$ (D) $a_{ij} = 0$ for all $i < j$
- 8- Every real number is a complex number with its imaginary part equal to
(A) real part (B) i (C) 0 (D) 1
- 9- Partial fractions of $\frac{1}{x^2+1}$ are
(A) $\frac{A}{x+1} - \frac{B}{x-1}$ (B) $\frac{A}{x+1} + \frac{B}{x-1}$ (C) $\frac{Ax+B}{x^2+1}$ (D) not possible
- 10- $\binom{n}{1} + \binom{n}{3} + \binom{n}{5} + \dots + \binom{n}{n-1} =$
(A) 2^{n+2} (B) 2^{n-2} (C) 2^{n-1} (D) 2^{n+1}
- 11- $\tan 3\theta =$
(A) $\frac{3 \tan \theta - \tan^3 \theta}{1 - 3 \tan^2 \theta}$ (B) $\frac{3 \tan^2 \theta - \tan \theta}{1 - 3 \tan^3 \theta}$ (C) $3 \tan \theta$ (D) $\tan^3 \theta$
- 12- Four 4th roots of 625 are
(A) $\pm 25i, \pm 25$ (B) $\pm 16i, \pm 16$ (C) $\pm 5i, \pm 5$ (D) $\pm 4i, \pm 4$
- 13- If A and B are disjoint sets, then $A - B =$
(A) $B - A$ (B) A (C) B (D) ϕ
- 14- $\sin(\tan^{-1}(-1)) =$
(A) 1 (B) -1 (C) $\frac{1}{\sqrt{2}}$ (D) $-\frac{1}{\sqrt{2}}$

(Turn over)

(2)

- 15- Number of elements of a triangle is
(A) 4 (B) 5 (C) 6 (D) infinite
- 16- If α, β are roots of the equation $3x^2 - 2x + 4 = 0$, then value of $\frac{\alpha}{\beta} + \frac{\beta}{\alpha}$ is
(A) $\frac{3}{4}$ (B) $-\frac{4}{3}$ (C) $\frac{5}{3}$ (D) $-\frac{5}{3}$
- 17- Two dice are thrown simultaneously, then the probability of getting a total of "7" number of dots is
(A) $\frac{1}{6}$ (B) $\frac{1}{18}$ (C) $\frac{4}{9}$ (D) $\frac{1}{9}$
- 18- 5th term of the sequence whose general term is $a_n = n + (-1)^n$, is
(A) 4 (B) 5 (C) 0 (D) -5
- 19- The complementary combination ${}^nC_r = {}^nC_{n-r}$ is useful when
(A) $n = r$ (B) $n < r$ (C) $r < \frac{n}{2}$ (D) $r > \frac{n}{2}$
- 20- If order of a matrix A is 2×3 and that of matrix B is 3×2 , then order of $(AB)^1$ is
(A) 3×3 (B) 2×2 (C) 3×2 (D) 2×3

214-(II)- 1stA 323-29000