Roll No. _____

MATHEMATICS **Intermediate Part-I , Class 11th (1st A 323- I)** **PAPER: I** **GROUP - I**

Time: 30 Minutes **OBJECTIVE** **Marks: 20**

Code: 6191

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- The multiplicative inverse of complex number (0 , 1) is

(A) $(0,-1)$ (B) $(-1,0)$ (C) $(1,0)$ (D) $(1,1)$

2- Converse of $p \rightarrow q$ is

(A) $\sim p \rightarrow q$ (B) $p \rightarrow \sim q$ (C) $q \rightarrow p$ (D) $\sim q \rightarrow p$

3- $(A^{-1})^t =$

(A) A (B) $-A^t$ (C) $A^{-1}A^t$ (D) $(A^t)^{-1}$

4- The trivial solution of the system $a_1x+b_1y=0$ and $a_2x+b_2y=0$ is

(A) (1 , 0) (B) (0 , 1) (C) (0 , 0) (D) (1 , 1)

5- Sum of all four fourth roots of unity is

(A) 1 (B) –1 (C) 0 (D) i

6- Roots of the equation $ax^2+bx+c=0$ are real and distinct if

(A) $b^2-4ac=0$ (B) $b^2-4ac>0$ (C) $b^2-4ac<0$ (D) $a^2-4ac>0$

7- A relation in which the equality is true for any value of unknowns is called

(A) identity (B) equation (C) fraction (D) conditional

8- The sequence 3, 6, 12, ... is

(A) A.P. (B) G.P. (C) H.P. (D) infinite

9- Harmonic mean between 3 and 7 is

(A) $\frac{5}{21}$ (B) $\frac{21}{5}$ (C) 5 (D) 21

10- Factorial form of $n(n-1)(n-2) =$ _____

(A) $\frac{n!}{(n-1)!}$ (B) $\frac{n!}{(n-2)!}$ (C) $\frac{n!}{(n-3)!}$ (D) $\frac{n!}{(n+3)!}$

11- If A and B are independent events and P(A) = 0.8 , P(B) = 0.7 then $P(A \cap B) =$

(A) 0.56 (B) $\frac{8}{7}$ (C) $\frac{7}{8}$ (D) 0.1

12- The sum of exponents of a and b in every term of the expansion of $(a+b)^n$ is

(A) 1 (B) 0 (C) 2n (D) n

13- The expansion of $(1+2x)^{-3}$ is valid only if

(A) $|x|<2$ (B) $|x|<\frac{1}{2}$ (C) $|x|<\frac{1}{3}$ (D) $|x|<\frac{1}{6}$

14- If length of arc and radius of circle are measured in cm then unit of Q is

(A) degree (B) radians (C) cm^2 (D) cm

15- $\text{Cos } 2\alpha =$

(A) $2\text{Cos}^2\alpha+1$ (B) $2\text{Cos}^2\alpha-1$ (C) $2\text{Sin}^2\alpha-1$ (D) $2\text{Sin}^2\alpha+1$

(2)

16- The smallest positive number P for which $f(x+P)=f(x)$ is called

(A) domain (B) co-domain (C) range (D) period

17- In any triangle ABC, $c^2 =$ _____

(A) $a^2+c^2-2ac\,\text{Cos}\beta$ (B) $a^2+b^2-2ab\,\text{Cos}\gamma$

(C) $b^2+c^2-2bc\,\text{Cos}\alpha$ (D) $a^2+b^2-2ab\,\text{Cos}\alpha$

18- Point of intersection of the angle bisectors of a triangle is called

(A) circum–centre (B) in–centre (C) ex–centre (D) ortho–centre

19- $2\text{Tan}^{-1}A =$

(A) $\text{Tan}^{-1}\frac{A}{1-A^2}$ (B) $\text{Tan}^{-1}\frac{2A}{1+A^2}$ (C) $\text{Tan}^{-1}\left(\frac{2A}{1-A^2}\right)$ (D) $\text{Tan}^{-1}\left(\frac{2A}{2-A^2}\right)$

20- If $\text{Sin}x + \text{Cos}x = 0$ then $x =$ _____

(A) $\frac{\pi}{4}, -\frac{\pi}{4}$ (B) $-\frac{\pi}{4}, -\frac{\pi}{2}$ (C) $-\frac{\pi}{4}, \frac{3\pi}{4}$ (D) $\frac{\pi}{4}, \frac{3\pi}{4}$