ll No._____

athematics (INTER PART-I) 319-(III) GROUP: II PAPER: I
me: 30 Minutes Code: 6196 Marks: 20

OBJECTIVE

te: 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. Attempt as many questions as given in objective type question paper and leave others blank.

1- Expansion of $(1+x)^{\frac{-1}{4}}$ is valid only if

(A) $|x|>1$ (B) $|x|<1$ (C) $|x|<-1$ (D) $|x|>-1$

2- The 8^{th} term of sequence $1, -3, 5, -7$ is

(A) 15 (B) −15 (C) 14 (D) −14

3- A reciprocal equation remains unchanged when variable x is replaced by

(A) $-\frac{1}{x}$ (B) $\frac{1}{x}$ (C) $\frac{1}{x^2}$ (D) $-x$

4- The solutions of equation $1+\sin\theta = 0$ are in quadrant

(A) I and IV (B) I and III (C) II and IV (D) III and IV

5- With usual notations, radius r of inscribed circle is given by

(A) $\frac{\Delta}{s}$ (B) $\frac{s}{\Delta}$ (C) $\frac{\Delta}{s-c}$ (D) $\frac{4\Delta}{abc}$

6- If $\tan\theta = \frac{1}{\sqrt{3}}$ and θ is in III quadrant then $\cot\theta$ equals

(A) $\sqrt{3}$ (B) $\frac{1}{\sqrt{3}}$ (C) $\frac{1}{2}$ (D) $-\frac{1}{2}$

7- ${}^{n-1}C_r + {}^{n-1}C_{r-1}$ equals

(A) ${}^{n+1}C_r$ (B) ${}^{n+1}C_{r+1}$ (C) ${}^{n}C_r$ (D) ${}^{n-1}C_r$

8- $\sin(\cos^{-1}\frac{1}{2})$ equals

(A) $\frac{\sqrt{3}}{2}$ (B) $\frac{1}{2}$ (C) $\frac{-\sqrt{3}}{2}$ (D) $\frac{-1}{2}$

9- $(x-1)^2 = x^2 - 2x + 1$ is called

(A) equation (B) inequality (C) identity (D) polynomial

10- For any two matrices A and B then $(AB)^t$ equals

(A) AB (B) A^tB^t (C) B^tA^t (D) BA

11- Additive inverse of $a \in \mathbb{R}$ is

(A) 2 (B) 1 (C) $\frac{1}{a}$ (D) $-a$

12- With usual notations, the value of $a + b + c$ is

(A) s (B) 2s (C) 3s (D) $\frac{s}{2}$

13- $\cos 315^\circ$ equals

(A) $\tan(-45^\circ)$ (B) $\tan 45^\circ$ (C) $\sin 45^\circ$ (D) $\operatorname{cosec} 45^\circ$

14- If A and B are disjoint then $P(A \cup B)$ equals

(A) $P(A) - P(B)$ (B) $P(A)\,P(B)$ (C) $\frac{P(A)}{P(B)}$ (D) $P(A) + P(B)$

15- If $\begin{bmatrix} \lambda & 4 \\ 3 & 2 \end{bmatrix}$ is singular then λ is equal to

(A) 2 (B) 6 (C) 4 (D) 8

16- The middle term in expansion of $(a + x)^n$ when n is even is

(A) $\left(\frac{n}{2}+1\right)$th term (B) $\left(\frac{n}{2}-1\right)$th term (C) $\left(\frac{n}{2}\right)$th term (D) $\left(\frac{n+1}{2}\right)$th term

17- Period of $\operatorname{cosec} 10x$ is

(A) $\frac{\pi}{10}$ (B) $\frac{2\pi}{5}$ (C) $\frac{\pi}{5}$ (D) $\frac{4\pi}{5}$

18- The domain of relation $f = \{(a, 1), (b, 1), (c, 1)\}$ is

(A) {a, b, c} (B) {a} (C) {b} (D) {1}

19- If ω is complex cube root of unity then ω^{15} equals

(A) 1 (B) zero (C) ω (D) $-\omega$

20- The arithmetic mean between $\frac{1}{2}$ and $\frac{1}{4}$ is

(A) $\frac{3}{8}$ (B) $\frac{3}{4}$ (C) $\frac{1}{8}$ (D) $-\frac{1}{8}$