

Model Paper

Mathematics Paper – XI

1۔ ہر سوال کے سامنے چار دائرے دئے گئے ہیں، صرف صحیح جواب والا دائرہ بھریں۔

2۔ دائروں کو شیڈ (بھرنے) کے لئے نیلے یا کالے رنگ کا مارکر استعمال کریں۔

3۔ جواب میں ایک سے زائد دائرے بھرنے سے جواب غلط تصور ہوگا۔

Time Allowed: 20 Minutes

SECTION – A

Marks : 20

- | | | | | | |
|----|--|---|---|--|--|
| 1 | If $Z = a + ib$ then $ Z - Z = \dots\dots\dots$ | ☐ $ Z $ | ☐ $ Z ^2$ | ☐ $ -Z $ | ☐ $ \bar{Z} $ |
| 2 | The matrix A has an inverse if A is matrix. | ☐ Square | ☐ Singular | ☐ None Singular | ☐ Rectangular |
| 3 | $(-i)^{-19} = \dots\dots\dots$ | ☐ i | ☐ -i | ☐ 1 | ☐ -1 |
| 4 | If $A = \begin{bmatrix} 2 & 3 & 1 & 4 \\ 0 & 5 & 2 & 1 \\ 0 & 0 & 3 & 2 \\ 0 & 0 & 1 & 4 \end{bmatrix}$ then $ A = \dots\dots\dots$ | ☐ 30 | ☐ 60 | ☐ 80 | ☐ 120 |
| 5 | A unit vector in the direction of the vector $4i - 3j$ is | ☐ $\frac{4i - 3j}{5}$ | ☐ $\frac{4i}{5} + \frac{3j}{5}$ | ☐ $\frac{4i - 3j}{25}$ | ☐ $\frac{4i + 3j}{25}$ |
| 6 | If α, β, γ are the direction angles of a vector r, then $\frac{y}{\sqrt{x^2 + y^2 + z^2}} = \dots\dots\dots$ | ☐ $\cos \alpha$ | ☐ $\cos \beta$ | ☐ $\cos \gamma$ | ☐ $\sin \beta$ |
| 7 | If i, j and k be the unit vectors then $i.k \times j = \dots\dots\dots$ | ☐ $j.i \times k$ | ☐ $k.i \times j$ | ☐ $j.k \times i$ | ☐ $j \times i.k$ |
| 8 | The nth term of the sequence 1, 5, 9, 13, is | ☐ $3n - 2$ | ☐ $4n - 1$ | ☐ $4n - 3$ | ☐ $4n - 2$ |
| 9 | The sequence where $t_1 = 1$ and $t_{n+1} = T_n + (n+1), n = 1, 2, 3, \dots$ is called | ☐ Factorial sequence | ☐ Triangle number sequence | ☐ Pascal sequence | ☐ Arithmetic sequence |
| 10 | The number of functions defined on n-points if each functional value is either '0' or '1' is | ☐ 2^{n-1} | ☐ 2^n | ☐ 2^{-n} | ☐ 2^{n+1} |
| 11 | If A and B are independent events then $P(A \cap B) = \dots\dots\dots$ | ☐ $P(A) - P(B)$ | ☐ $P(A) + P(B)$ | ☐ $P(A) P(B)$ | ☐ $P(A) P(A/B)$ |
| 12 | $n^4 > 3n^2 + 2n + 1$ is true for | ☐ $n \geq 1$ | ☐ $n \geq 3$ | ☐ $n \geq 2$ | ☐ $n \geq 4$ |
| 13 | $\binom{K+1}{0} = \dots\dots\dots$ | ☐ $\binom{K}{1}$ | ☐ $\binom{K+1}{1}$ | ☐ $\binom{K-1}{1}$ | ☐ $\binom{K}{0}$ |
| 14 | The function $f(x) = 3x + 7$ is | ☐ Even | ☐ Odd | ☐ Both even and odd | ☐ None of these |
| 15 | The solution set of $2x + y < 5$ is | ☐ $(3, -2)$ | ☐ $(3, 2)$ | ☐ $(4, -1)$ | ☐ $(-1, 8)$ |
| 16 | $\tan\left(\frac{3\pi}{2} + \theta\right) = \dots\dots\dots$ | ☐ $\cot \theta$ | ☐ $-\cot \theta$ | ☐ $\tan \theta$ | ☐ $-\tan \theta$ |
| 17 | The reciprocal of the period is called | ☐ Wave length | ☐ Amplitude | ☐ Frequency | ☐ Time period |
| 18 | Period of $\frac{1}{2} \tan 3x$ is | ☐ 3π | ☐ $\frac{\pi}{3}$ | ☐ $\frac{3\pi}{2}$ | ☐ π |
| 19 | In half angle formula $\frac{(S-b)(S-c)}{bc} = \dots\dots\dots$ | ☐ $\sin \frac{\alpha}{2}$ | ☐ $\sin^2 \frac{\alpha}{2}$ | ☐ $\cos^2 \frac{\alpha}{2}$ | ☐ $\cos \frac{\alpha}{2}$ |
| 20 | If $\sec^{-1} 2 = \theta$ then $\theta \in \dots\dots\dots$ | ☐ $[0, \pi] - \left\{\frac{\pi}{2}\right\}$ | ☐ $\left[0, \frac{\pi}{2}\right]$ | ☐ $\left[0, \frac{3\pi}{2}\right] - \{\pi\}$ | ☐ $[0, 2\pi] - \left\{\frac{\pi}{2}\right\}$ |