Model Paper **Mathematics Paper – XI**

1۔ہر سوال کے سامنے چار دائرے دیئے گئے ہیں، صرف صحیح جواب والا دائرہ بھر دیں۔

2۔دائروں کو شیڈ (بھرنے) کے لئے نیلے یا کالے رنگ کا مار کر 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| = ……	◯ |Z|	◯ $\|Z\|^2$	◯ |–Z|	◯ $\|\bar{Z}\|$
2	The matrix A has an inverse if A is …….. matrix.	◯ Square	◯ Singular	◯ None Singular	◯ Rectangular
3	$(-i)^{-19}$ = ……..	◯ 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 $\|A\|=$	◯ 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 $\frac{y}{\sqrt{x^2+y^2+z^2}}$ = ……..	◯ Cos α	◯ Cos β	◯ Cos γ	◯ Sin β
7	If i, j and k be the unit vectors then i.k×j=……	◯ j.i.×k	◯ k.i.×j	◯ j.k.×i	◯ j×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,….. 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 $P(A \cap B)$=	◯ 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	$\binom{K+1}{0}$=……	◯ $\binom{K}{1}$	◯ $\binom{K+1}{1}$	◯ $\binom{K-1}{1}$	◯ $\binom{K}{0}$
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	$\text{Tan}\left(\frac{3\pi}{2}+\theta\right)=$ ……	◯ Cot θ	◯ – Cot θ	◯ Tan θ	◯ – Tan θ
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 $\frac{(S-b)(S-c)}{bc}$ = …..	◯ Sin $\frac{\alpha}{2}$	◯ $\text{Sin}^2\frac{\alpha}{2}$	◯ $\text{Cos}^2\frac{\alpha}{2}$	◯ Cos $\frac{\alpha}{2}$
20	If Sec^{-1} 2 = θ then $\theta\in$ = ……..	◯ $[0,\pi]-\left\{\frac{\pi}{2}\right\}$	◯ $\left[0,\frac{\pi}{2}\right]$	◯ $\left[0,\frac{3\pi}{2}\right]-\{\pi\}$	◯ $[0,2\pi]-\left\{\frac{\pi}{2}\right\}$