

Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	$\cos(\alpha + \beta) + \cos(\alpha - \beta) =$	<p>A. $4 \cos \alpha \cos \beta$</p> <p>B. $2 \cos \alpha \cos \beta$</p> <p>C. $2 \sin \alpha \sin \beta$</p> <p>D. $2 \sin \alpha \cos \beta$</p>
2	If l, m, n are the d.c.'s of a line, then	<p>A. $l^2 + m^2 + n^2 = 0$</p> <p>B. $l^2 + m^2 + n^2 = 1$</p> <p>C. $l + m + n = 1$</p> <p>D. $l = m = n = 1$</p>
3	Question Image	
4	A function from X to X is denoted as	<p>B. $f : X \text{ to } Y$</p> <p>D. $f : Y \text{ to } Y$</p>
5	The term involving x^4 in the expansion of $(3 - 2x)^7$ is	<p>A. 120</p> <p>B. 1512</p> <p>C. 1250</p> <p>D. 15120</p>
6	Question Image	
7	The coordinates of the point that divides the join of A(-6,3) and B(5, -2) in the ratio 2:3 externally are	
8	The unit vector along x-axis is	D. none of these
9	π is the period of the function	<p>A. $\sin x + \sin x$</p> <p>B. $\sin^4 x + \cos x$</p> <p>C. $\sin(\sin x) + \sin(\cos x)$</p> <p>D. None of these</p>
10	The sum of first n even number is	<p>A. n^2</p> <p>B. $n(n+1)$</p> <p>C. $n+1$</p> <p>D. $n+2$</p>
11	A committee consists of 9 experts taken from three institutions A, B, and C, of which 2 are from A, 3 from B and 4 from C. If three experts resign, then the probability that they belong to different institutions is	<p>A. $1/729$</p> <p>B. $1/24$</p> <p>C. $1/21$</p> <p>D. $2/7$</p>
12	Two cards are drawn at random from a well shuffled pack of cards. The probability that at least one of them is a face card is	<p>A. $3/17$</p> <p>B. $5/17$</p> <p>C. $7/17$</p> <p>D. $9/17$</p>
13	Question Image	<p>A. quadratic function</p> <p>B. constant function</p> <p>C. trigonometric function</p> <p>D. linear function</p>
14	The matrix $A = [a_{ij}]_{m \times n}$ with $m \neq n$ is always	<p>A. Symmetric</p> <p>B. Hermition</p> <p>C. Skew-symmetric</p> <p>D. None</p>
15	A second degree equation in which coefficients of x^2 and y^2 are equal and there is no product term xy represents:	<p>A. a parabola</p> <p>B. a circle</p> <p>C. an ellipse</p> <p>D. a pair of lines</p>

16	A circle passing through the vertices of any triangle is called	A. Circumcircle B. Incircle C. Escribed circle D. Unit circle
17	Group of non-singular matrices under multiplication is	A. None-Abelian group B. Semi group C. Abelian group D. None of these
18	Order (or sense) of an inequality is changed by multiplying or dividing its each side by a:	A. Zero B. one C. negative constant D. Non negative constant
19	How many terms of the A.P 3,6,9,12,15.....must be taken to make the sum 108	A. 8 B. 6 C. 7 D. 36
20	$\sin(180^\circ - \theta) =$	A. $\cos\theta$ B. $-\cos\theta$ C. $\tan\theta$ D. $\sin\theta$