

ECAT Computer Science Entry Test

Sr	Questions	Answers Choice
1	$\sin(\alpha + \beta) - \sin(\alpha - \beta) =$	A. $4 \cos \alpha \sin \beta$ B. $2 \cos \alpha \sin \beta$ C. $4 \cos \alpha \cos \beta$ D. $4 \sin \alpha \sin \beta$
2	$\sin(\alpha + \beta) + \sin(\alpha - \beta)$	A. $2 \sin \alpha \cos \beta$ B. $2 \cos \alpha \sin \beta$ C. $2 \sin \alpha \sin \beta$ D. None of these

$$\sin (\alpha - \beta) =$$

background-color: rgb(255, 255, 224);"><i>β</i>
C. sin<i>α</i>cos<i style="text-align: center;">α</i>- cos<i style="text-align: center;">β</i><sin<i>β</i>
D. sin<i>α</i>cos<i style="text-align: center;">α</i>- cos<i style="text-align: center;">β</i><sin<i>β</i>

A. sin><i>α</i>cos><i>β</i>- cos><i>α</i>sin><i>β</i>

B. `sin<i>α</i>cos<i>β</i>>` `cos<i>α</i>sin<i>β</i>>`

C. `sin<i>β</i>cos<i>α</i>>`

<cos<i style="text-align: center;">a</i>- cos<i style="text-align: center;">β</i></sin<i>β</i>
D. sin<i>a</i>
<cos<i style="text-align: center;">a</i>- cos<i style="text-

$$\sin(\alpha + \beta) =$$

		align: center;">β</i>sin<i>β</i>
5	Tan 2θ=	
6	cos θ/2=	
7	sin α=	A. 2 sin<i>α</i>cos<i>α</i> B. 2 sin<i>α</i>cos<i>β</i> C. 2 sin<i style="text-align: center;">α</i>/2 cos<i style="text-align: center;">α</i>/2 D. 1+ tan<sup>2</sup><i style="text-align: center;">α</i>/2
8	sin(180° -θ)=	A. cos<i>θ</i> B. -cos<i>θ</i> C. Tan<i>θ</i> D. Sin<i>θ</i>
9	cos 2α=	A. sin<sup>2</sup><i>α</i>+ cos<sup>2</sup><i>α</i> B. -cos<i>θ</i> C. tan<i>θ</i> D. None of these
		A. -sin<i>θ</i>

		rgb(255, 255, 224);"><i>θ</i> B. cos<i>θ</i> C. sin<i>θ</i> D. -cos<i>θ</i>
10	Question Image	
11	Tan(α-β)=	
12	Fundamental law is	
13	Let P(x1, y1) and Q(x2, y2) be two points in the co-ordinate plane. Let d = distance between P and Q	
14	Question Image	A. G.P B. H.P. C. A.P. D. No particular sequence
15	Tan 3x tan 2x-tan x is equal to	A. Tan x tan 2x tan 3x B. -tan x tan 2x tan 3x C. Tan x tan 2x - tan x tan 3x - tan 2x tan 3x D. None of these
16	The value of the expression 3 cosθ+ 4 sinθlie between	A. -7 and 7 B. -25 and 25 C. -1 and 1 D. -5 and 5
17	The value of the expression sinθ+ cosθlies between	
18	Question Image	
19	Question Image	
20	Question Image	
21	Question Image	A. 45° B. 30° C. 75° D. 60°
22	The value of sin 28°cos 17°+cos 28°sin 17°is	
23	If sin A = cos A, 0°<A<90° then A is equal to	A. 1 B. 1/2 C. 0 D. None of these
24	The value of sin ² 20° + sin ² 70° is equal to	A. 1 B. 2 C. -1 D. 1/2
25	Sin 50°-sin 70°+sin 10° is equal to	A. 1 B. 0 C. 1/2 D. 2
26	Question Image	A. Right angled B. Obtuse angled C. Isosceles D. Equilateral
27	The maximum value of sin x + cos x is	
28	The maximum value of 12 sinθ-9 sin ² θis x	A. 3 B. 4 C. 5 D. None of these
29	The maximum value of 12 sinθ-9 sin ² θis x	A. 3 B. 4 C. 5 D. None of these

If $\sin x + \sin^2 x = 1$, then the value of $\cos^{12} x + 3\cos^{10} x + 3\cos^8 x + \cos^6 x + 2\cos^4 x + \cos^2 x - 2$ is equal to

- A. 0
- B. 1
- C. 2
- D. $\sin^2 x$