ECAT Pre Engineering Entry Test

Sr	Questions	Answers Choice
1	Question Image	A. 1 B. 0 C. 3 D. -3
2	Question Image	
3	$\tan^{-1}x > \cot^{-1}x$ holds for	A. x > 1 B. x < 1 C. x = 1 D. All values of x
4	Question Image	A. 1/3 B. 1 C. 3 D. None of these
5	Question Image	A. Cos 2x = sin 4y B. Cos 4y = cos 2x C. Cos 3y = sin 4x D. None of these
6	Question Image	
7	Question Image	A. 0 B. 1 C. -1 D. None of these
8	Question Image	A. 1 B. -1 C. 0 D. None of these
9	Question Image	A. x = 3 B. x = 1/5 C. x = 0 D. None of these
10	Question Image	
11	If $\cos^{-1}p + \cos^{-1}q + \cos^{-1}r = \pi$ then $p^2 + q^2 + r^2 + 2pqr$ is equal to	A. 3 B. 1 C. 2 D. -1
12	Question Image	A. 1 B. 7 C. 4 D. None of these
13	Question Image	A. π / 4 B. π / 6 C. π / 3 D. 2π

		/ 3
14	Question Image	A. π / 2 B. π / 3 C. π / 4 D. π
15	Question Image	
16	If 2 $\tan^{1}(\cos x) = \tan^{-1}(\text{cosec}^{2}x)$, then x is equal to	A. π / 3 B. π / 2 C. π / 6 D. π
17	Question Image	A. 1 B. -1 C. 0 D. None of these
18	The value of sin [arc cos (-1/2)] is	
19	$\tan^{-1}(1/4) + \tan^{-1}(2/9)$ is equal to	A. 1/2 cos⁻¹(3/5) B. 1/2 sin⁻¹(3/5) C. 1/2 tan⁻¹(3/5) D. tan⁻¹1/2
20	If five triangles are constructed having sides of the lengths indicated below, the triangle that will NOT be a right triangle is	A. 8, 15, 17 B. 3, 4, 5 C. 12, 15, 18 D. 5, 12, 13
21	If Cosθ=0, thenθ= _____	A. nπ /2 B. (2n + 1)π/2 C. (2n - 1)π /2 D. (4n + 1)<span style="font-family:

		"Times New Roman"; font-size: 24px; color: rgb(34, 34, 34); text-align: center; background-color: rgb(255, 255, 224);">π/2
22	If θ= 60° then	A. sinθ= 1/2 B. tanθ= cot 30° C. θ=π/4 D. secθ= 4
23	If you are looking a high point from the ground, then the angle formed is	A. Angle of elevation B. Angle of depression C. Right angle D. Horizon
24	Area of ΔABC=	A. ab sinα B. 1/2 ab sinα C. 1/2 ac sinγ D. 1/2 ac sinβ
25	If the angle of a triangle are in the ratio 2 : 3 : 7, the triangle is	A. Obtuse B. Acute C. Right angle D. Isosceles
26	120° degrees are equal to how many radians?	
27	PQ is a post of given height a, and AB is a tower at some distance; α and β are the angles of elevation of B, the top of the tower, at P and Q respectively. The height of the tower and its distance from the post are	
28	The horizontal distance between the two towers is 60 m. the angular elevation of the top of the taller tower as seen from the top of the shorter one is 30°. If the height of the taller tower is 150 m, the height of the shorter one is	A. 116 m B. 200 m C. 216 m D. None of these
29	The angle of elevation of a tower from a point A due south of it is x and from a point B due east of A is y. If AB = 1, then the height h of the tower is given by	
30	The longer side of a parallelogram is 10 cm and the shorter is 6 cm. If the longer diagonal makes an angles 30° with the longer side, the length of the longer diagonal is	