Mathematics ECAT Pre Engineering Online Test

Sr	Questions	Answers Choice
1	A circle drawn inside a triangle and touching its sides is called _____;	A. Circumcirle B. Incircle C. Escribed circle D. unit circle
2	A circle passing through the vertices of any triangle is called	A. Circumcirle B. Incircle C. Escribed circle D. Unit circle
3	If you are looking someone on the ground from the top of a hill the angle formed is called angle of _____;	A. Elevation B. Depression C. Right angle D. None off these
4	If you are looking a bird in the tree from the ground then the angle formed is called angle of_____;	A. Elevation B. Depression C. Right angle D. None of these
5	InΔABC if y = 90° then the Pythagoras theorem is	A. b2 + c2 =a2 B. a2 + b2 = c2 C. a2 +c2 = b2 D. None of these
6	If ΔABC is right triangle then the law of Cosines reduces to	A. The Pythagoras Theorem B. The law of Sines C. The law of cosines D. The law of tangents
7	With usual notations b2 = a2 + c2 -2ac cos is called_____;	A. None of these B. Law of sines C. Law of consines D. Law of tangents
8	In a triangle if a > 45°,β > 30° then y cannot be	A. 90° B. 100° C. 10° D. 120°
9	A triangle has ____ elements	A. 3 B. 4 C. 5 D. 6
10	A triangle which is not right angle is called _____ triangle	A. acute B. Obtuse C. Right D. Oblique
11	graph of trigonometric function y = sec x does not meet	A. x - axis B. y -axis C. both axis D. None of these
12	graph of sine function is bounded between lines	A. y± 1 = 0 B. x± 1 = 0 C. x± y - 0 D. None of these
13	Range of y = sec x is	A. -1≤ y≤ 1 B. y≥ 1 or y≤ -1 C. y≤ 1or y≥ -1 D. -∞ < y < +∞
14	Range if y = cos x is	A. -1≤ y≤ 1 B. -1 < y < 1 C. -∞ < x < +∞ D. None of these
15	sin2 π/6 + sin2 π/3 + tan2 π/4 =_____;	A. 1 B. 2 C. 3 D. 4

16	tan 294° =_____;	A. tan 24° B. -tan 24° C. cot 24° D. -cot 24°
17	cos 6θ + cos 2 θ =_____;	A. -2sin 4θ sin 2θ B. 2cos4θ cos2θ C. 2sin4θ cos2θ D. 2cos4θ sin2θ
18	sin5θ+sin3θ = _____;	A. 2sin 4θ cosθ B. 2cos 4θ sinθ C. 2cos 4θ cosθ D. -2sin 4θ sinθ
19	cos(a +β)-cos(a-β) = _____;	A. 2cosa cosβ B. 2sina cosβ C. -25 in a cosβ D. -2sin a sinβ
20	sin(a + β)+sin(a -β) =_____;	A. 2cosa cosβ B. 2sina cosβ C. 2cosa sinβ D. -2sina sinβ
21	cos 3a =_____;	A. 3sin a - 4sin3 a B. 4sin a - 3sin3 a C. 3cos3 a - 4cos a D. 4cos3a - 3cos a
22	sin 3a = _____;	A. 3sin a - 4sin3a B. 4sin a -3 sin3 a C. 3 cos3 a -cosa D. 4cos3 a - 3cos a
23	2cos2 a/2 =_____;	A. 1+sina B. 1-sina C. 1+cosa D. 1-cosa
24	cos2a=_____;	A. cos2 a-sin2 a B. 2cos2 a-1 C. 1-2 sin2 a D. All of these
25	sin(a-90°)=_____;	A. sina B. cosa C. -sinθ D. -cosa
26	tan(3π/2 +θ)=_____;	A. tanθ B. cotθ C. -tanθ D. -cotθ
27	cot(3π/2 -θ)=_____;	A. tanθ B. cotθ C. -tanθ D. -cotθ
28	cos(3π/2 +θ) = _____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
29	sin(3π/2 -θ)=_____;	A. sinθ B. cosθ C. -sinθ D. -cosθ
30	tan(π-θ)=_____;	A. tanθ B. cotθ C. -tanθ D. -cotθ