Mathematics ECAT Pre Engineering Chapter 14 Application of Trigonometry Online Test

Sr	Questions	Answers Choice
1	If a, b, c are the measures of the sides of a triangle then	
2	Question Image	
3	An observer on the top of a cliff 200 m above the sea level, observes the angles of depression of two ships on opposite sides of the cliff to be 45° and 30°, respectively. The distance between the ships if the line joining them points to the base of cliff is	
4	A person standing on the bank of a river observes that the angle of elevation of the top of a tree on the opposite bank of the river is 60° and when he retires 40 meters away from the tree the angle of elevation becomes 30°. The breadth of the river is	A. 40 m B. 30 m C. 20 m D. 60 m
5	Area of inscribed circle is	A. π R2 B. π η2 C. π r22 D. π r2
6	Question Image	
7	Question Image	
8	Question Image	
9	At a point 15 meters away from the base of a 15 meters high house, the angle of elevation of the top is	A. 90° B. 60° C. 30° D. 45°
10	IfΔABC is right, law of cosine reduce to	A. Law of sine B. Law of tangent C. Phthogorous theorem D. Hero's formula
11	The angle AOP which the ray from an observer's eye at O to an object at P at a lower level makes with horizontal ray OA through O is called the	A. Angle of depression B. Angle of elevation C. Acute angle D. Obtuse angle
12	Question Image	A. The law of consines B. The law of sines C. The law of tangents D. None of these
13	The law of consines is	
14	A circle passing through the vertices of any triangle is called	A. Circumcirle B. Incircle C. Escribed circle D. Unit circle
15	Question Image	
16	The angle of depression of a point situated at a distance of 70 meters from the base of a tower is 45°. The height of the tower is	A. 70 m B. 85 m C. 35 m D. None of these
17	A tower subtends an angle of 30° at a point distant d from the foot of the tower and on the same level as the foot of the tower. At a second point, h vertically above the firs, the angle of depression of the foot of the tower, is 60°. The height of the tower is	A. h/3 B. h/3d C. 3h D. 3h / d
18	E-radius corresponding to < C is	
19	Question Image	
20	The angle of elevation of the tops of two towers at the middle point of the line joining the foots of the tower are $60^{o}$and 30^{o}respectively. The the ratio of the heghts of the tower is	A. 2 : 1 B. 3 : 1 C. 1 : 2 D. 1 : 3
21	Question Image	

22	A person standing on the bank of a river observes that the angle subtended by a tree of the opposite bank is 60°, when he retreats 40 m from the bank, he finds the angle to be 30°. The height of the tree and the breadth of the river are	
23	Question Image	
24	Question Image	A. 30° B. 60° C. 45° D. None of these
25	x = r2, y = 1 are the parametric equation of	A. Circle B. Hyperbola C. Ellipse D. Parabola
26	Question Image	
27	The angle of elevation of the top of a tree from a point 17 meters from is foot is 42□The height of the tree is	A. 12m B. 21m C. 17m D. 15m
28	E-radius corresponding to < B is	
29	A vertical pole is 8m high and the length of its shadow is 6m. The angle of elevation of the sun of the moment is	A. 57□ B. -48□ C. 27□ D. 53□
30	The law of sines is	
31	Question Image	
32	Question Image	
33	Question Image	
34	e-radii are denoted by	A. η B. r2 C. r3 D. All of these
35	A circle drawn inside a triangle and touching its sides is called	A. In-circle B. Circum circle C. Escribed circle D. None of these
36	Question Image	
37	The law of tangents is _____	
38	When the angle between the ground and the sun is 30□,flag pole costss a shadow of 40 mg long. the height of the top of the flag is	A. 25m B. 23m C. 12m D. 29m
39	In ladder leaning against a vertical well makes an angle of 24□with the wall, Its foot is 5m from the wall, its length is	A. 5.47m B. 2m C. 7m D. 6.29m
40	Question Image	
41	Area of⊿ABC=	A. ab sinα B. 1/2 ab sinα C. 1/2 ac sinγ D. 1/2 ac sin<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255,

		248);">β
42	For any equilateral r :R :η :r1 :r2 :r3 =	A. 1:2:3:4:5 B. 1:2:3:3:3 C. 1:2:4:4:4 D. 2:1 :2 :2 :2
43	A circle which touches one side of a triangle externally and the other two sides produced is called _____	A. In-circle B. Circum cirle C. Escribed circle D. None of these
44	A circle passing through the vertices of any triangle is called _____	A. In circle B. Circum circle C. Escribed circle D. None of these
45	The upper 3/4 the portion of a vertical pole subtends an angle $\tan^{-1}3/5$ at a point in the horizontal plane through its foot and at a distance 40 m from the foot. A possible height of the vertical pole is	A. 20 m B. 40 m C. 60 m D. 80 m
46	If sided of□ABC are 16,20,and 33, then the value of the greatests angle to	A. 150□ 20' B. 132□ 35' C. 101□ 25' D. 160□ 50'
47	Question Image	
48	Question Image	A. The law of sines B. The law of tangents C. The pythagorus theorem D. None of these
49	The process of finding the unknown elements in triangle is called the	A. solution of the triangle B. Mean differnece C. Engineering distance D. angle of depressin
50	If Cosθ=0, thenθ= _____	A. nπ/2 B. (2n + 1)π/2 C. (2n - 1)π/2 D. (4n + 1)π/2
51	In-radius is denoted by	A. r B. η C. r2 D. R
52	Question Image	A. The law of sines B. The law of consines C. The law of tangents D. None of these
53	The towers each 120 meters high are 800 meters apart. The measure of the angle of elevation from the base of one tower to the top of the other is	A. 12[□] B. 9[□] C. 7[□] D. -120[□]
54	Question Image	A. The law of sines B. The law of consines C. The law of tangents D. None of these
55	The law of sines can be used to solve	A. Right angle triangle B. Isosceles triangle C. oblique triangle D. hexagon

		D. Hexagon
56	Question Image	
57	A person standing on the bank of a river finds that the angle of elevation of the top of a tower on the opposite bank is 45°. then which of the following statements is correct?	A. Breadth of the river is twice the height of the tower B. Breadth of the river an the height of the tower are the same C. Breadth of the river is half of the height of the tower D. None of these
58	An airplane flying at height of 300 meters above the ground passes vertically above another plane at an instant when the angle of elevation of the two planes from the same point on the ground are 60° and 45° respectively. Then the height of the lower plane from the ground is (in meters).	
59	If the elevation of the sun is 30°, then the length of the shadow cast by a tower of 150 ft height is	
60	A man of height 6 ft observes the top of a tower and the foot of the tower at angles of 45° and 30° of elevation and depression respectively. The height of the tower is	
61	The law of sines can be used to solve oblique triangle when following information is given:	A. Two angles and a side B. Two sides and an angle opposite one of the given sides C. Two sides and the angle between two sided D. Option a and b
62	E-radius corresponding to < A is	
63	IfΔABC is right, law of cosine reduce to	A. Law of sine B. Law of tangent C. Phthogorous theorem D. Hero's formula
64	The angles of elevation of the top of a tower at the top and the foot of a pole of height 10 m are 30° and 60° respectively. The height of the tower is	A. 10 m B. 15 m C. 20 m D. None of these
65	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
66	PQ is a post of given height a, and AB is a tower at some distance;$\alpha$and$\beta$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	
67	If the flag-staff 6 meters high placed on the top of a tower. Makes the shadow 2√3 m on the ground, then the angle of elevation of the sun is	A. 30^o B. 35^o C. 45^o D. 60^o
68	A kite flying at a height of 67.2 m is attached to a fully stretched string inclined at an angle of 53 to the horizontal, the length of the string	A. 62m B. 82m C. 73m D. 57m
69	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
70	The quadratic equation 8 sec2θ - 6 secθ +1 =0 has	A. Infinitely many roots B. Exactly two roots C. Exactly four roots D. No roots
71	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
72	The angle of depression of a point A on the ground from the top of the tower is 30□,then the angle of elevation of the top of the tower at the point A is	A. 60□ B. 40□ C. 41□ D. 30□
73	A chimney is such that on walking towards it 50 m in a horizontal line through its base the angular elevation of its top changes from 30° to 45°. The height of the chimney is	
		A. sin<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color:

74	Ifθ= 60° then	rgb(255, 255, 248);">θ = 1/2 B. tanθ = cot 30° C. θ =π /4 D. secθ = 4
75	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	
76	Question Image	
77	In triangle ABC, in which b=95, c=34, a =52□then the value of a=	A. 18 cm B. 18.027 cm C. 20.7 cm D. 19 cm
78	Question Image	
79	The triangle that does not have a right angle is called.	A. Isosceles triangle B. right angle triangle C. equivalent triangle D. oblique triangle
80	A triangle which is not right is called an _____ triangle	A. Acute B. Obtuse C. Oblique D. None of these
81	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
82	The angle of depression of the point at a distance 70 meters from the foot of the tower from the top of the tower is 45□.The height of the tower is	A. 37m B. 97m C. 101m D. 70m
83	120° degrees are equal to how many radians?	
84	A circle which touches one side of a triangle extermally and the other two sides produced is called	A. In-circle B. Circumcircle C. e-circle D. Point circle
85	Question Image	
86	Question Image	A. R B. 2R C. r D. 2r
87	Question Image	
88	A triangle has six	A. side B. elements C. angle D. tangents
89	Question Image	
90	Question Image	A. The law of of sines B. The law of tangents C. The law of consines D. None of these
		A. b cotαtan<span style="color:

91	A tower subtends an angleαat a point on the same level as the root of the tower and at a second point, b meters above the first, the angle of depression of the foot of the tower isβ. The height of the tower is	rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color: rgb(255, 255, 248);">β B. b tanαtanβ C. b tanαcotβ D. None of these
92	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	
93	A circle drawn inside a triangle and touching its sides is called _____;	A. Circumcirle B. Incircle C. Escribed circle D. unit circle
94	AB is a vertical pole and C is its middle point. The end A is on the level ground and P is any point on the level ground other than A. the portion CB subtends and angleβat P. If AP : AB = 2 : 1 thenβ=	