

## ECAT Mathematics Chapter 14 Application of Trigonometry

Sr	Questions	Answers Choice
1	The angle of elevation of the top of a tree from a point 17 meters from its foot is $42^\circ$ . The height of the tree is	A. 12m B. 21m C. 17m D. 15m
2	The longer side of a parallelogram is 10 cm and the shorter is 6 cm. If the longer diagonal makes an angle $30^\circ$ with the longer side, the length of the longer diagonal is	
3	The process of finding the unknown elements in triangle is called the	A. solution of the triangle B. Mean difference C. Engineering distance D. angle of depression
4	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
5	At a point 15 meters away from the base of a 15 meters high house, the angle of elevation of the top is	A. $90^\circ$ B. $60^\circ$ C. $30^\circ$ D. $45^\circ$
6	The angle of depression of a point situated at a distance of 70 meters from the base of a tower is $45^\circ$ . The height of the tower is	A. 70 m B. 85 m C. 35 m D. None of these
7	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
8	Question Image	
9	If $\theta = 60^\circ$ then	A. $\sin \theta = 1/2$ B. $\tan \theta = \cot 30^\circ$ C. $\sec \theta = 2\sqrt{3}$ D. $\sec \theta = 4$
10	Question Image	
11	The law of tangents is _____	
12	Area of inscribed circle is	A. $\pi R^2$ B. $\pi \eta^2$ C. $\pi r^2$ D. $\pi r^2$

13 The angle of elevation of the tops of two towers at the middle point of the line joining the feet of the tower are  $60^\circ$  and  $30^\circ$  respectively. The ratio of the heights of the tower is  
B.  $3 : 1$   
C.  $1 : 2$   
D.  $1 : 3$

14 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  $60^\circ$  and when he retires 40 meters away from the tree the angle of elevation becomes  $30^\circ$ . The breadth of the river is  
A. 40 m  
B. 30 m  
C. 20 m  
D. 60 m

15 Question Image

16  $120^\circ$  degrees are equal to how many radians?

17 A person standing on the bank of a river observes that the angle subtended by a tree on the opposite bank is  $60^\circ$ , when he retreats 40 m from the bank, he finds the angle to be  $30^\circ$ . The height of the tree and the breadth of the river are

18 If the flag-staff 6 meters high placed on the top of a tower. Makes the shadow  $2\sqrt{3}$  m on the ground, then the angle of elevation of the sun is  
A.  $30^\circ$   
B.  $35^\circ$   
C.  $45^\circ$   
D.  $60^\circ$

19 Question Image

20 Question Image

A. The law of sines  
B. The law of cosines  
C. The law of tangents  
D. None of these