

100 DAYS ONLINE COACHING. DAY 95.- TRIGONOMETRY. (TUESDAY). 16-07-2019.



NAME OF THE CANDIDATE *

M4

DISTRICT *

PATHANAMTHITTA

Contact number *

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QUESTIONS

1. The angle of elevation of the top of the building at a distance of 50 m from its foot on a horizontal plane is found to be 60 degree. Find the height of the building. *

1 point

 86.6 87.5 87.6 86.5

2. A string of a kite is 100 meters long and it makes an angle of 60° with horizontal. Find the height of the kite, assuming that there is no slack in the string. *

1 point

 50 $50\sqrt{3}$ m 51 $50(2)^{1/3}$

3. The length of a string between a kite and a point on the ground is 90 m. If the string is making an angle θ with the level ground such that $\tan \theta = 15/8$, how high will the kite be? *

1 point

 79.41 78 78.41 79

4. A ladder 5 m long, leaning against a vertical wall makes an angle of 65° with the ground. How high on the wall does the ladder reach? * 1 point

4.53

4.43

3.43

3.53

5. A ladder 5 m long, leaning against a vertical wall makes an angle of 65° with the ground. What angle does the ladder make with the wall? * 1 point

25 degree

30 degree

20 degree

none of these

6. A ladder placed against a wall such that it reaches the top of the wall of height 6 m and the ladder is inclined at an angle of 60° degree. Find how far the ladder is from the foot of the wall. * 1 point

3.4

3.5

3.6

3.3

7. A man wants to determine the height of a light house. He measured the angle at A and found that $\tan A = 3/4$. What is the height of the light house if A is 40 m from the base? *

1 point

 33 35 30 38

8. An aeroplane is observed to be approaching the airpoint. It is at a distance of 12 km from the point of observation and makes an angle of elevation of 50 degree. Find the height above the ground. *

1 point

 9.192 9.369 9.679 9.596

9. A kite flying at a height of 65 m is attached to a string inclined at 31° to the horizontal. What is the length of string ? *

1 point

 126.2 136.2 135 125

10. A ladder 5 m long, leaning against a vertical wall makes an angle of 65° with the ground. How far is the foot of the ladder from the wall? *

1 point

 2.11 2.25 2.55 2.33

11. From the top of the tower 30m height a man is observing the base of a tree at an angle of depression measuring 30 degree. Find the distance between the tree and the tower. *

1 point

 $30\sqrt{3}$ 30 31 $31\sqrt{3}$

12. A balloon is connected to a meteorological station by a cable of length 200 m inclined at 60 degree angle . Find the height of the balloon from the ground. (Imagine that there is no slack in the cable)

1 point

*

 173.2 175 174.2 174

13. From the top of a fire tower, a forest ranger sees his partner on the ground at an angle of depression of 40° . If the tower is 45 feet in height, how far is the partner from the base of the tower, to the nearest tenth of a foot? *

1 point

 50 53 55

14. A nursery plants a new tree and attaches a guy wire to help support the tree while its roots take hold. An eight foot wire is attached to the tree and to a stake in the ground. From the stake in the ground the angle of elevation of the connection with the tree is 45° . Find to the nearest tenth of a foot, the height of the connection point on the tree. *

1 point

 5.45 4.56 5.65 4.65

15. Find the shadow cast by a 10 foot lamp post when the angle of elevation of the sun is 60° . Find the length to the nearest tenth of a foot. *

1 point

 5 4.7 5.7 4

16. Andrew was flying a kite on a hill, but he dumped his kite into the pond below. If the length of the string of his kite is 150 meters and the angle of depression from his position to the kite is 30° , then how high is the hill where he is standing? *

1 point

- 60
- 65
- 75
- 70

17. The angle of elevation of the top of an incomplete vertical pillar at a horizontal distance of 100 meters from its base is 45 degrees. If the angle of elevation of the top of the complete pillar from the same spot is to be 60 degrees, then by how much the height of the incomplete pillar should be increased? *

1 point

- $100(\sqrt{3} - 1)$
- $100(\sqrt{2} - 1)$
- 100
- $99(\sqrt{2} - 1)$

18. A six-meter-long ladder leans against a building. If the ladder makes an angle of 60° with the ground, how far from the wall is the base of the ladder? *

1 point

- 4
- 3
- 3.5
- 2.5

19. A six-meter-long ladder leans against a building. If the ladder makes an angle of 60° with the ground, how far up the wall does the ladder reach *

1 point

 $3\sqrt{3}$ 3 $2\sqrt{3}$ 2

20. A ship travels on a $N50^\circ E$ course. The ship travels until it is due north of a port which is 10 nautical miles due east of the port from which the ship originated. How far did the ship travel? *

1 point

 13 10 12 11

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