**Self-Assignment -1**

**Topic: Applications of Trigonometry**

**Class: 10th Max. Marks: 20**

**Answer all questions. Each question carries 2 marks. 4 × 2 = 8M**

1. A person 25m away from a cell tower observes the top of the cell tower at an angle of elevation 300. Draw the suitable diagram for this situation?
2. From the top tower of height ‘h’, Anusha observes the angles of depression of two points X and Y on the same side of the tower on the ground to be α and β. Draw the suitable figure to the given information?
3. A tower stands vertically on the ground. From a point on the ground, 20m away from the foot of the tower, the angle of elevation of the top of the tower is 600. What is the height of the tower?
4. The angle of elevation of the top of a temple is cot-1 from a point on the ground 40m away from the foot of the temple. Find the height of the temple?

**Answer all questions. Each question carries 4 marks. 3 × 4 = 12 M**

1. A person from the top of a building of length 15m observes the top and bottom of a cell tower with an angle of elevation as 600 and the angle of depression as 450 respectively. Then find the height of cell tower?
2. Two polls are standing opposite to each other on the either side of the road which is 90 feet wide. The angle of elevation from the bottom of first poll to the top of the second poll is 450.the angle of elevation from the bottom of second poll to the top of first poll is 300. Find heights of the polls? (use = 1.732).
3. A bird is sitting on the top of a 80m height tree. From a point on the ground, the angle of elevation of the bird is 450. The bird flies away horizontally in such a way that it remained at a constant height from the ground. After two seconds the angle of elevation of the bird from the same point is 300. Find the speed of flying of board?