



TEST PAPER: MATHEMATICS

Time: 50 Minutes

Class: 10th C.B.S.E.

Max. Marks: 30 Marks

Date: 21st November, 2018

Marking Scheme: *Three questions carry 10 marks each. Questions have 3 subparts each. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.*

Question 1:

- The upper part of a tree, broken over by the wind, makes an angle of 45° with the ground; and the distance from the root to the point where the top of the tree touches the ground, is 15 m. What was the height of the tree before it was broken?
- Which term of the sequence 6, 11, 16, 21, 26, is 126?
- If the 5th term and 12th term of an Arithmetic Progression are 30 and 65 respectively, find the sum of its 26 terms.

Question 2:

- Find the seventeenth term of the Arithmetic Progression: 31, 25, 19, 13
- The 5th term of an Arithmetic Progression is 16 and 13th term of an Arithmetic Progression is 28. Find the first term and common difference of the Arithmetic Progression.
- Find the height of a tree when it is found that on walking away from it 20 m in a horizontal line through its base, the elevation of its top changes from 60° to 30° .

Question 3:

- At a particular time when sun's altitude is 30° , the length of the shadow of altitude is a vertical tower is 45 m. Calculate the height of the tower.
- Find the first term and common difference of an Arithmetic Progression whose third term is 7 and seventh term is two more than thrice of its third term.
- The angle of elevation of the top of an unfinished tower at a point distance 80 m from its base is 30° . How much higher must the tower be raised so that its angle of elevation at the same point may be 60° ?