TEST PAPER: MATHEMATICS

Time: 50 Minutes **Class: 10th C.B.S.E.**

Max. Marks: 30 Marks **Date: 10th October, 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:

a. Find the sum of odd integers from 1 to 2001.

b. Solve: $2(x^2 + 1) = 5x$

c. An arithmetic sequence has a common difference equal to 10 and its 6^{th} term is equal to 52. Find its 15^{th} term.

Question 2:

a. How many terms of the AP : 24, 21, 18, . . . must be taken so that their sum is 78?

b. For what value of k will the following quadratic equation give equal roots? Also, find the solution for that value of k:
$3x^2 + kx + 2 = 0$

c. An arithmetic sequence has a its 5^{th} term equal to 22 and its 15^{th} term equal to 62. Find its 100^{th} term.

Question 3:

a. The product of two positive consecutive even integer is 168. Assuming the smaller integer to be x, frame an equation for the statement and find the numbers.

b. Which term of the A.P.: 3, 15, 27, 39, ... will be 120 more than its 53rd term?

c. If the 8th term of an A.P. is 37 and the 15th term is 15 more than the 12th term, find the A.P. Hence find the sum of the first 15 terms of the A.P.