TEST PAPER: MATHEMATICS

Time: 50 Minutes **Class: 9th 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:

a. The curved surface area of a cone is 12320 cm^2. If the radius of its base is 56 cm, find its height.

b. If the radius of a sphere is doubled then what is the ratio of their volumes?

c. A solid sphere of radius 15 cm is melted and recast into solid right circular cones of radius 2.5 cm and height 8 cm. Calculate the number of cones recast.

Question 2:

a. A bag contains 7 white, 3 red and 4 black balls. A ball drawn at random. Find the probability that it is a red or a black ball.

b. i. A die is thrown once. Find the probability of getting a prime number.
ii. From a group of 2 boys and 3 girls, we select a child. Find the probability of this child being a girl.

c. Construct a ΔXYZ in which $\angle Y = 45°$, $\angle Z = 75°$ and XY + YZ + ZX = 12 cm.

Question 3:

a. Answer the following:
   (i) If P(E) = 0.2, find P (not E).
   (ii) "Probability of an event cannot be greater than 1". Is the statement true or false?
   (iii) What is the probability of a sure event?

b. Given below is the frequency distribution of wages (in Rs.) of 30 workers in a certain factory

Wages (in Rs.)	110-130	130-150	150-170	170-190	190-210	210-230	230-250
No. of workers	3	4	5	6	5	4	3

A worker is selected at random. Find the probability that his wages are:
(i) less than Rs. 150
(ii) at least Rs. 210
(iii) more than or equal to 150 but less than 210.

c. Construct a right triangle whose base is 12 cm and sum of its hypotenuse and other side is 18 cm.