TEST PAPER: MATHEMATICS

Time: 50 Minutes **Class: 9th I.C.S.E.**

Max. Marks: 30 Marks **Date: 19th December, 2018**

Marking Scheme: *Three questions carry 10 marks each. Questions have two subparts (a) and (b) carrying 5 marks each.*

Question 1:

a. A hollow sphere of internal and external diameters 4 cm and 8 cm respectively is melted into a cone of base diameter 8 cm. Find the height of the cone.

b. Find the mean of the following distribution by shortcut (assumed mean) method:

Class Interval	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
Frequency	10	6	8	12	5

Question 2:

a. Draw a histogram to represent the following data and find the mode:

Pocket money in Rs.	No. of students
150 – 200	10
200 – 250	5
250 – 300	7
300 – 350	4
350 – 400	3

b. A metallic sphere of radius 10.5 cm is melted and then recast into small cones each of radius 3.5 cm and height 3 cm. Find the number of cones thus formed.

Question 3:

a. The table below shows the distribution of the scores obtained by 120 shooters in a shooting competition. Using a graph sheet, draw an ogive for the distribution.

Score obtained	Number of shooters
0 – 10	5
10 – 20	9
20 – 30	16
30 – 40	22
40 – 50	26
50 – 60	18
60 – 70	11
70 – 80	6
80 – 90	4
90 – 100	3

Use your ogive to estimate:

i. Median. ii. Upper quartile iii. Lower quartile iv. The inter quartile range.

b. If the mean of the following distribution is 7.5, find the missing frequency f:

Variable	5	6	7	8	9	10	11	12
Frequency	20	17	f	10	8	6	7	6