TEST PAPER: MATHEMATICS

Time: 50 Minutes **Class: 8th I.C.S.E.**

Max. Marks: 30 Marks **Date: 9th January, 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. Write down the number of faces of each of the following figures:
   (i) Tetrahedron
   (ii) Rectangular pyramid
   (iii) Triangular prism

b. Find the length of the longest pole that can be placed in a room 12 m long, 8 m broad and 9 m high.

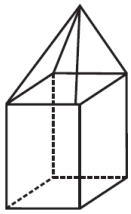
c. (i) A cube has ……. vertices, ……. edges and ……. faces.
   (ii) The point at which three faces of a figure meet is known as its …….
   (iii) A cuboid is also known as a rectangular …….
   (iv) Can a polyhedron be formed with three triangles?

Question 2:

a. Using Euler's formula, fill the blanks. (Redraw the table and show the workings below the table)

Faces	?	5	20
Vertices	6	?	12
Edges	12	9	?

b. For the polyhedron shown below,



   i. Verify Euler's formula
   ii. Draw one nets

c. Consider a cylindrical vessel whose circular base has a diameter of 14 cm and the height is 2 cm. Find:
   i. Volume
   ii. Curved surface area
   iii. Flat surface area
   iv. Total surface area

Question 3:

a. The volume of a cube is 343 cm^3. Find its surface area.

b. The surface area of a cube is 1176 cm^2. Find its volume.

c. The volume of the cuboid is 1296 m^3. Its length is 24 m and its breadth and height Are in the ratio of 3:2. Find the breadth and height of the cube.