Full Marks- 25

Class: VIII   Subject: Mathematics   Time:1 HRS

All questions are compulsory

**Answer these questions**   **2 x 5**

1. (a) A closed wooden box 80cm long, 65cm wide and 45cm high, is made 2.5 cm thick wood. Find the capacity of the box and its weight if 100 cm^3 of wood weighs 8g.
   (b) Find the cost of painting 15 cylindrical pillars of a building at Rs. 2.50 per square meter, if the diameter and height of each pillar are 48 cm and 7 meters respectively.

2. (a) In the given figure ABCD is a trapezium in which AD II BC, $< ABC= 90^0$, AD=16 cm, AC=41cm and BC=40 cm, find the area of the trapezium.
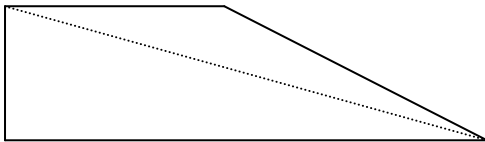
   (b) The parallel sides of a trapezium are 20 cm and 10cm. Its nonparallel sides are both equal, each being 13 cm. find the area of the trapezium.

3. (a) find the value of x for which
   $(5/3)^{-4}$ x $(5/3)^{-5}= (5/3)^{3x}$

   (b) Evaluate $\{(1/3)^{-3}-(1/2)^{-3}\} \div (1/4)^{-3}$

4. (a) Find the least number which must be added to 8400 to obtain a perfect square. Find this perfect square and its square root.
   (b) Find the smallest number by which 8788 must be divided so that the quotient is a perfect cube.

5. (a) Write the properties of whole number:-
   (b) Represent 2/3 and -2/3 on the number line.

6. Fill in the blanks: 1x10= 10
   (a) The product of a rational number and its reciprocal is _____
   (b) 2/3- (…….) = 1/15
   (c) The additive inverse and multiplicative inverse of 6 are _____and _____respectively.
   (d) The standard form of 360000 is _____
   (e) 1+3+5+7+9+11+13= (_____)^2
   (f) Area of a trapezium= 1/2x ((____) x (____)
   (g) The relation between number of faces (F), number of Edges (E) and number of vertices (V) for 3-dimensional figure is _____
   (h) The values of 0/4 and 4/0 are _____and _____
   (i) The volume of road roller is _____
   (j) The total surface area of a match box is _____

7. Multiple choice questions: 1x5= 5
   I. The ration of the radial of two cylinders is 2:3 and the ratio of their heights is 5:3. The ratio of their
      volume will be
      (a) 4:9   (b) 9:4   (c) 20:27   (d) 27:20
   II. The maximum length of a pencil that can be kept in a rectangular box of dimensions 12 cm x 9cm x
      8cm is
       (a) 13 cm   (b) 17 cm   (c) 18 cm   (d) 19 cm
   III. $(3^{-6} \div 3^4)$
       (a) 3^{-2} (b) 3^2 (c) 3^{-10} (d) 3^{10}
   IV. Which of the following is a Pythagorean triplet?
       (a) (2,3,5)   (b) (5,7,9)   (c) (6,9,11)   (d) (8,15,17)
   V. $\sqrt[5]{1024/16807}$=?
       (a) 4/9   (b) 4/7   (c) 8/7   (d) 8/21