

**CLASS: VIII**

**FULL MARKS: 50**

**SUBJECT: MATHEMATICS**

**TIME: 1 HOUR 15 MINUTES**

**Section – A (20 Marks)**

**(Attempt all the questions from this section)**

1. Answer the following questions:

**[2 × 5]**

- a) If 5% of VAT is included in the prices, find the original price of a cooking oil bought for Rs. 220.
- b) If set  $P = \{1, 2, 3, 4, 5, 6, 7\}$  and  $Q = \{1, 4, 5, 6, 7, 8\}$ , find  $P - Q$ .
- c) Find the product of the cube of  $(-3)$  and square of  $(+5)$ .
- d) Add  $5x + 7y - 9z$ ,  $5x - 7y + 2z$ ,  $x - 3y - 2z$ ,  $3z - 6x + 4y$  by column method.
- e) Find  $P'$  when Universe set  $(U) = \{x | x \in N, X \leq 10\}$ ,  $P = \{1, 2, 4, 6\}$ .

2.

**[3 + 3 + 3 + 1]**

- a) How long will it take a certain sum of money to 4 times of itself at  $12\frac{1}{2}\%$  per annum simple interest?
- b) If  $(3p + 5q)$  units,  $(9p + q)$  units,  $(p + 14q)$ , and  $(5p - 6q)$  units are the length of the sides of a quadrilateral field, then find the perimeter of the quadrilateral field.
- c) A retailer marks his goods 20% above cost price and allows a discount of 5%. What gain percent does he make?
- d) The volume of a cube is  $729 \text{ cm}^3$ , find the length of an edge of cube.

**Section – B (20 Marks) (Attempt any three questions from this section)**

3.

**[3 + 3 + 4]**

- a) The area of a trapezium is  $392 \text{ cm}^2$ . If the ratio of parallel sides is  $3 : 4$  and the distance between them is  $16 \text{ cm}$ , find the lengths of parallel sides.

b) Two adjacent sides of a parallelogram are 20 cm and 10 cm. If the distance between longer sides is 8 cm, find the distance between shorter sides.

c) A rectangular pit 1.4 m long, 90 cm broad and 70 cm deep was dug and 1000 bricks of base 21 cm by 10.5 cm were made from the earth dug out. Find the height of each.

4.

[3 + 3 + 4]

a) If universe set  $U = \{10, 20, 30, 40, 50, 60, 70, 80, 90\}$   $P = \{10, 20, 30, 40, 50, 60\}$   $Q = \{40, 60, 80, 90\}$ , then find  $P' \cup Q'$ ?

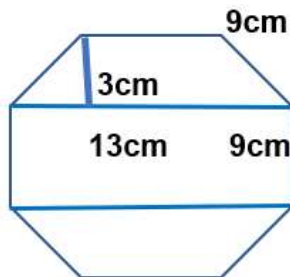
b) Two cylindrical jars contain the same amount of water. If their diameters are in the ratio 5 : 6, find the ratio of their heights.

c) An Iron pole is 8 m high and 21 cm in diameter. Find its weight if the iron weighs 400 kg per  $m^3$ .

5.

[3 + 3 + 4]

a) Top surface of a raised platform is in the shape of a regular octagon as shown in the given figure. Find the area of the octagonal surface.



b) Find the value of 'p' for  $\left\{\left(\frac{-2}{5}\right)^2\right\} p \times \left(\frac{-5}{2}\right)^{-1} = \frac{-8}{125}$

c) Rita and Gita are friend. They have equal amount of money in their pockets. Rita gave  $\frac{1}{4}$  of her money to Gita for buying books and Gita buy books by paying half of the total money with her. If the remaining money in Gita's pocket is 1600 rupees, then find the sum given by Rita.