

MATHEMATICS

Class VIII

Time : 3 hrs.

M.M: 100

Date –

General Instructions:

- The question paper is divided into **four sections**.
 - ✓ Section A comprises of **5 questions** of **1 mark** each.
 - ✓ Section B comprises of **5 questions** of **3 marks** each.
 - ✓ Section C comprises of **10 questions** of **5 marks** each.
 - ✓ Section D comprises of **5 questions** of **6 marks** each.
- Draw neat diagrams wherever needed.
- All questions are compulsory to attempt.
- Show all calculations in fair.

SECTION – A

Q.1 The additive inverse of $\frac{2}{-7}$ is _____.

Q.2 If $\frac{3}{7} + x = \frac{17}{7}$, then x = _____.

Q.3 Solve $17 + 6p = 9$.

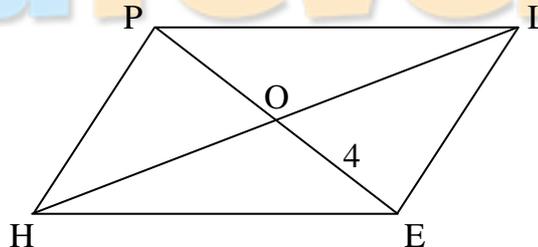
Q.4 How many diagonals does a regular hexagon have ?

Q.5 Find the ratio of 5mm to 50m.

SECTION – B

Q.6 Simplify $15(y - 4) + 2(y - 9) + 5(y + 6) = 0$.

Q.7 HELP is a parallelogram (lengths are in cms) given that OE is 4 and HL is 5 more than PE, find OH.



Q.8 State whether true or false.

- All parallelograms are trapeziums.
- All rectangles are squares.
- All kites are rhombuses.

Q.9 Express 121 as the sum of 11 odd numbers.

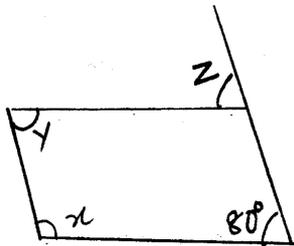
Q.10 Find the square root of 12.25

SECTION – C

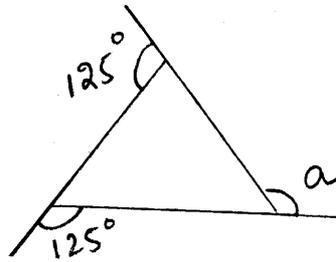
Q.11 Using appropriate properties, find : $\frac{-2}{3} \times \frac{3}{5} + \frac{5}{2} - \frac{3}{5} \times \frac{1}{6}$

Q.12 Find five rational numbers between $\frac{-3}{2}$ and $\frac{5}{3}$.

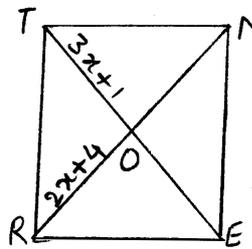
- Q.13** The perimeter of a rectangle is 13cm and its width is $2\frac{3}{4}$ cm. Find its length.
- Q.14** The digits of a two digit number differ by 3. If the digits are interchanged and the resulting number is added to the original number, we get 143. What can be the original number?
- Q.15** Three consecutive integers are such that when they are taken in increasing order and multiplied by 2, 3 and 4 respectively, they add up to 74. Find these numbers.
- Q.16** Find the values of the unknowns in the following figures :



Parallelogram



- Q.17** i) RENT is a rectangle. Its diagonals meet at O. Find x , if $OR=2x+4$ and $OT=3x+1$.



- ii) Find the number of sides of a regular polygon whose each exterior angle has a measure of 45° ?

- Q.18** Construct a rectangle WISE in which $WI = 7\text{cm}$, $IS = 5\text{cm}$.

- Q.19** Find the cube root of i) 8000 ii) 13824

- Q.20** Find the smallest number by which each of the following numbers must be multiplied to obtain a perfect cube. i) 100 ii) 675

SECTION – D

- Q.21** Find compound interest paid when a sum of Rs. 10,000 is invested for 1 year and 3 months at $8\frac{1}{2}\%$ per annum compounded annually.
- Q.22** Construct a rhombus whose diagonals are 5.2 cm and 6.4 cm long. Write steps of construction.
- Q.23** Rajeev bought an article for Rs. 15,500. Rs. 450 was spent on its repairs. He sold the article to Raghav for a profit of 15%. Raghav gave Rs. 19,342.50 to Rajeev. Rajeev said “It is not the correct amount” and returned him the balance. Find the correct amount. What value is depicted by Rajeev?
- Q.24** i) Find the square root of 1024 by division method.
ii) Find the least number which must be added to 252 to get a perfect square. Also find the square root of the perfect square so obtained.
- Q.25** Construct a quadrilateral PLAN in which $PL=4\text{cm}$, $LA=6.5\text{cm}$, $\angle P=90^\circ$, $\angle A=110^\circ$, $\angle N=85^\circ$

