



I SEMESTAR EXAMINATION 2024-25

SUBJECT: MATHEMATICS

DATE:

GRADE : VIII

MARKS : 80

NAME:

TIME: 2:30 Hrs

Maximum Marks: 80

Answers to this Paper must be written on the paper provided separately.

You will not be allowed to write during the first 15 minutes

This time is to be spent in reading the question paper.

This Paper is divided into two Sections.

Attempt all questions from Section A and any four questions from Section B.
The intended marks for questions or parts of questions are given in brackets [].

SECTION A

(Attempt all questions from this Section)

Question 1

Choose the correct answers to the questions from the given options:

[15]

(1) Multiplicative inverse of $\frac{-3}{7}$ is

A) $\frac{7}{3}$
C) 0

B) $\frac{-7}{3}$
D) -1

(2) How many diagonals does a regular hexagon have?

A) 10
C) 9

B) 12
D) 7

(3) $(a^m)^n$ is equal to

A) a^{m+n}
C) a^{mn}

B) a^{m-n}
D) a^{n-m}

(4) The reciprocal of positive rational number is _____

A) Negative
C) Not defined

B) zero
D) positive

(5) In a polyhedron $F=5$, $E=8$ then V is

A) 3
C) 7

B) 5
D) 9

(6) $14\% =$ _____

A) $\frac{1}{4}$
C) $7\frac{1}{2}$

B) $\frac{14}{100}$
D) $\frac{14}{100 \times 100}$

(7) $0.56 =$ _____

A) 560 %

B) 5.6 %

C) 56 %

D) 0.5 %

(8) What is the sum of the additive inverse and multiplicative inverse of 2?

A) $3/2$

B) $-3/2$

C) $1/2$

D) $-1/2$

(9) The _____ of a rhombus are perpendicular bisectors of one another.

A) angles

B) sides

C) diagonals

D) none of these

(10) Gain = _____

A) C.P – S. P

B) S.I

C) S.I + LOSS

D) S.P – C.P

(11) Value of $(3^0 + 2^0) \times 5^0$ is

A) 1

B) 4

C) 2

D) 0

(12) Loss% = _____

A) $\left(\frac{\text{gain}}{\text{C.P}} \times 100\right) \%$

B) $\left(\frac{\text{AMOUNT}}{\text{C.P}} \times 100\right) \%$

C) $\left(\frac{\text{loss}}{\text{C.P}} \times 100\right) \%$

D) $\left(\frac{\text{rate}}{\text{C.P}} \times 100\right) \%$

(13) A Cuboid has _____ edges

A) 12

B) 15

C) 9

D) 10

(14) What percent of 80 is 92

A) 115

B) 201

C) 200

D) 205

(15) Which of the following is true for the adjacent angles of a parallelogram?

A) they are equal to each other

B) they are complementary angles

C) they are supplementary angles

D) none of these.

Question 2

1) Find six rational numbers between $\frac{-1}{2}$ and $\frac{5}{4}$ [4]

2) Express each of the following decimals as a percentage. [4]

i) 0.06

ii) 0.008

3) Divide the sum of $\frac{-13}{8}$ and $\frac{5}{12}$ by their difference.

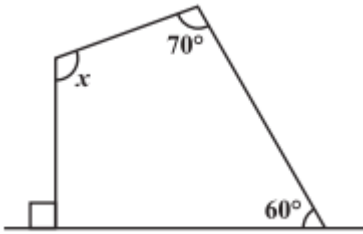
Question 3

1) Represent $\frac{11}{4}$ on the number line [3]

2) If the angles of a pentagon are in the ratio 7 : 8 : 11 : 13 : 15. Find the angles in the pentagon [4]

3) On increasing a number by 15%, it becomes 299. Find the number [3]

4) Find x in the following figure [3]

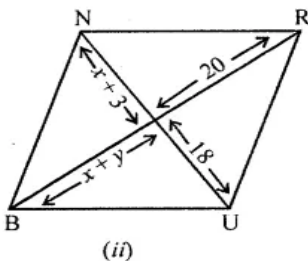
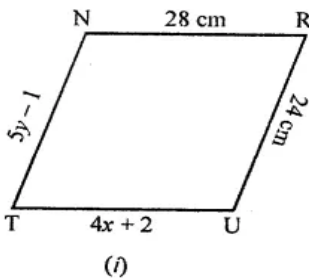


SECTION B

(Answer any four questions from this Section.)

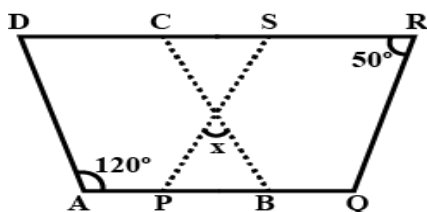
Question 4

- 1) $\left[(5)^2 - \left(\frac{1}{4} \right)^{-2} \right] \times \left(\frac{3}{4} \right)^{-2}$ [3]
- 2) Find the value of the following
 i) $\frac{-3}{7} \div 4$ ii) $\frac{-5}{6} \div \frac{7}{12}$ [3]
- 3) In figure TURN and BURN are parallelograms. Find measures of x and y. [4]



Question 5

- 1) Find the area of square lawn whose one side is $5\frac{7}{9}$ m long. [3]
- 2) By selling an article for ₹770, a man incurs a loss of ₹ 110. Find his loss percentage [3]
- 3) In following figure, ABCD and PQRS is a parallelogram. Find the value of x. [4]



Question 6

- 1) Find the discount and discount percentage, when
 Advertised price = ₹ 28500, selling price = ₹ 24510 [3]

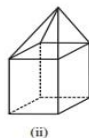
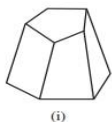
- 2) Find the value of m for which $9^m \div 3^{-2} = 9^4$ [3]
- 3) A heptagon has three equal sides each of 120 and four equal angles. Find the size of equal angles. [4]

Question 7

- 1) Simplify: $\frac{49 \times z^{-3}}{7^{-3} \times 10 \times z^{-5}}$ where, $z \neq 0$. [3]
- 2) Convert each of the following fraction into a percent i) $\frac{7}{5}$ ii) $\frac{11}{16}$ [3]
- 3) Out of 8000 candidates, 60% were boys. If 80% of the boys and 90% of the girls passed the exam, find the total number of candidates who failed. [4]

Question 8

- 1) There are 75 apples in a basket of which 12 % are rotten. How many apples are good enough to be sold? [3]
- 2) Find the selling price when, [3]
 - i) C.P = ₹7640 and Gain = 15 %
- 3) Verify Euler's formula for these solids [4]

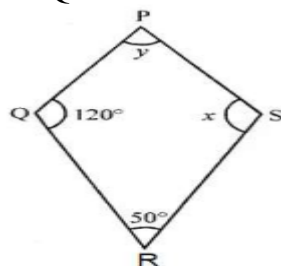


Question 9

- 1) Express each of the following percentage as a ratio [3]
 - i) 38 %
 - ii) 178 %
- 2) i) Draw an oblique sketch of cuboid of length 5 units, breadth 3 units, and height 4 units. [3]
 ii) Draw an oblique square pyramid of side 3 units and height 4 units
- 3) A shopkeeper buys 200 bicycles at Rs. 1200 per bicycle. He spends Rs, 30 per bicycle on transportation. He also spends Rs. 400 on advertising. Then he sells all the bicycle at Rs. 1350 per piece. Find his profit or loss Also, calculate it as a percentage. [4]

Question 10

- 1) In the given figure PQRS is a kite. find the value of x . [3]



- 2) i) If a polyhedron has 8 faces and 8 vertices find the number of edges. [3]
 ii) Find the number of faces, vertices and edges in decagonal pyramid.
- 3) Evaluate using law of exponents. [4]
 - i) $5^2 \div 5^{-7}$
 - ii) $(-4)^{-2}$
 - iii) $3^2 \times 3^{-5} \times 3^6$
 - iv) $[7^0 + 7^2] \times 5^{-2}$