

Name: Jhanvi

Roll No. 30

**MID TERM EXAMINATION (2024-2025)**



**CLASS VIII**

**SUBJECT : MATHEMATICS**

**M.M. : 60**

**Time : 2 hr 30 minutes**

**General Instructions:**

- Section A carries 12 multiple choice questions of 1 mark each, 6 fill in the blanks carrying 1 mark each and 6 true /false of 1 mark each.
- Section B contains 4 questions (q.no 15-18) of 2 marks each
- Section C contains 2 questions (q.no 19-20) of 3 marks each
- Section D contains 3 questions (q.no 21-23) of 4 marks each.
- Section E contains two case study-based questions (q.no 24 and 25) of 5 marks each.
- All the questions are compulsory, however internal choice is provided.

**Section-A**

**(1 × 24 =24)**

**From Q1 to 12 , choose the correct option (12 marks)**

- Q1. The reciprocal of  $-1$  is  
a. 1                      b.  $-1$                       c. 0                      d. not defined
- Q2. The probability of getting a multiple of 2 when a dice is rolled is  
a.  $\frac{1}{6}$                       b.  $\frac{1}{3}$                       c.  $\frac{1}{2}$                       d.  $\frac{2}{3}$
- Q3. The sum of all angles of a quadrilateral is  
a.  $180^\circ$                       b.  $270^\circ$                       c.  $360^\circ$                       d.  $300^\circ$
- Q4. The additive inverse of  $-1\frac{1}{7}$  is  
a.  $\frac{8}{7}$                       b.  $-\frac{8}{7}$                       c.  $\frac{7}{8}$                       d.  $-\frac{7}{8}$
- Q5. The sum of successive odd numbers 1, 3, 5, 7, 9, 11, 13 and 15 is  
a. 81                      b. 64                      c. 49                      d. 36
- Q6. The next two numbers in the number pattern 1, 4, 9, 16, 25, ... are  
a. 35, 48                      b. 36, 49                      c. 36, 48                      d. 35, 49
- Q7. The one's digit of the cube of 23 is  
a. 6                      b. 7                      c. 3                      d. 9
- Q8. The marked price of an article is ₹80 and it is sold at ₹76, then the discount rate is  
a. 5%                      b. 95%                      c. 10%                      d. approx. 11%

- Q9. Data represented using circles is known as  
 a. Bar graph    b. Histogram    c. Pictograph    d. Pie chart
- Q10. Which of the following is not a perfect square?  
 a. 361    b. 1156    c. 1128    d. 1681
- Q11. If the adjacent sides of parallelogram are equal then parallelogram is a  
 a. Rectangle    b. trapezium    c. rhombus    d. square
- Q12. A number of the form  $\frac{p}{q}$  is said to be a rational number if  
 a. P and q are integers    b. P and q are integers and  $p \neq 0$   
 c. P and q are integers and  $q \neq 0$     d. P and q are integers and  $p \neq 0$  also  $q \neq 0$ .
- Q13. Fill in the blanks : (6 marks)

- a. In a rhombus diagonals intersect at \_\_\_\_\_ angles.
- b. The equivalent of  $\frac{5}{7}$ , whose numerator is 45 is \_\_\_\_\_.
- c. If  $\frac{7}{3}\%$  of a number is 42, then the number is \_\_\_\_\_.
- d. The cube of 100 will have \_\_\_\_\_ zeroes.
- e. Convert the statement : adding 15 to four times x is 39 into an equation : \_\_\_\_\_
- f. If  $6x = 18$ , then the value of  $18x =$  \_\_\_\_\_

Q14. State true or false: (6 marks)

- i. Every parallelogram is a trapezium. \_\_\_\_\_
- ii. For all rational numbers a, b and c,  $a(b+c) = ab + bc$ . \_\_\_\_\_
- iii. A polygon is regular if all of its sides are equal. \_\_\_\_\_
- iv.  $363 \times 81$  is a perfect cube. \_\_\_\_\_
- v. Amav buys a book costing ₹ 600. If the rate of sales tax is 7%, then the total amount payable by him is ₹ 642. \_\_\_\_\_
- vi. If x and y are integers such that  $x^2 > y^2$ , then  $x^3 > y^3$ . \_\_\_\_\_

#### SECTION-B

(2 × 4 = 8 marks)

Q15. Find the smallest number by which 675 should be multiplied to obtain a perfect cube.

Q16. Solve:

$$2x - 1 = 14 - x$$

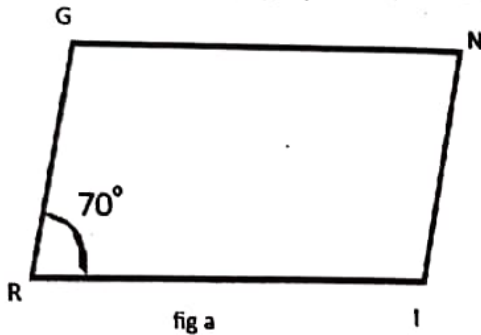
Q17. Verify the property  $x + y = y + x$  of rational numbers by taking

$$x = \frac{-3}{7} \text{ and } y = \frac{20}{21}$$

Q18. Three angles of a quadrilateral are equal. Fourth angle is of measure  $120^\circ$ . What is the measure of equal angles?

OR

Q18. In a parallelogram (fig. a) RING, if  $m\angle R = 70^\circ$ , find all the other angles.



**SECTION-C**

**(3 × 2 = 6 marks)**

Q19. Difference of two perfect cubes is 189. If the smaller of the two numbers is 3, find the cube root of the larger number.

Q20. Write a Pythagorean triplet whose smallest member is 8.

**SECTION-D**

**(4 × 3 = 12 marks)**

Q21. What is the least number that must be subtracted from 1385 to get a perfect square? Also find the square root of the perfect square so obtained.

Q22. Solve

$$3(5x - 7) + 2(9x - 11) = 4(8x - 7) - 111$$

OR

Q22. Solve :  $3x - \frac{x-2}{3} = 4 - \frac{x-1}{4}$

Q23.

**(2 + 2)**

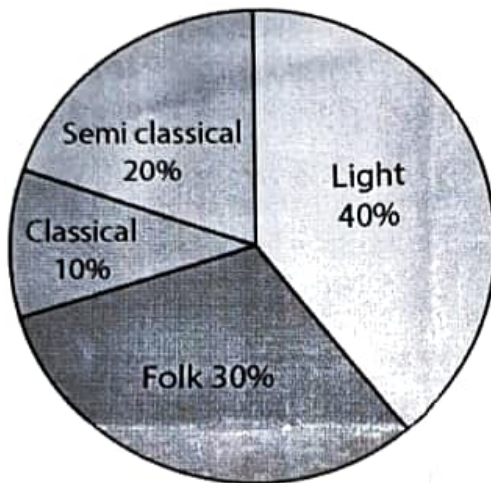
- a) A watch worth ₹5400 is offered for sale at ₹4500. What percent of discount is offered during the sale?
- b) A football team won 10 matches out of the total number of matches they played. If their win percentage was 40, then how many matches did they play in all ?

SECTION-E

(5 × 2 = 10 marks)

Q24. A survey was made to find the type of music that a certain group of young people liked in a city. The adjoining pie chart shows the findings of this survey. From this pie chart, answer the following: (2 + 1 + 2)

- If 20 people liked classical music, how many young people were surveyed?
- Which type of music is liked by the maximum number of people?
- If a cassette company were to make 1000 CD's, how many of each type would they make?



Q25. Shalini deposited ₹40,000 in abc bank. The bank offered the interest at the rate of 8% p.a. compounded annually. She deposited the amount for two years. (2 + 1 + 2)

- Find the interest she gets at the end of first year.
- What will be the principal for the second year?
- What will be total amount in her account after two years?