9SHRI GULABRAO ESHWARA KHANDVE EDUCATIONAL FOUNDATION,

JAGADGURU INTERNATIONAL SCHOOL, LOHEGAON PUNE

TERM – I EXAM (2024-25)

Class: VIII **Subject: Mathematics**

Date: 23/09/2024 **Max. Marks.: 80**

Roll No. : **Time: 3 Hrs.**

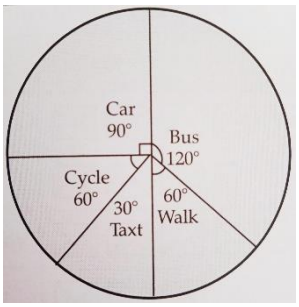
General Instructions:

i) This Question Paper has 5 Sections A, B, C, D and E.
ii) Section A has 20 MCQs carrying 1 mark each.
iii) Section B has 5 questions carrying 02 marks each.
iv) Section C has 6 questions carrying 03 marks each.
v) Section D has 4 questions carrying 05 marks each.
vi) Section E has 3 case based integrated units of assessment (04 marks each) with sub- parts of the values of 1, 1 and 2 marks each respectively.
vii)All Questions are compulsory. However, an internal choice in 2 Questions of 5 marks, 2 Questions of 3 marks and 2 Questions of 2 marks has been provided. An internal choice has been provided in the 2marks questions of Section E .

	SECTION A	
Sr. No.	**Section A consists of 20 questions of 1 mark each.**	**Marks**
	Tick the correct answer.	
Q.1)	1. What should be added to $-\frac{5}{4}$ to get -1? (a) $-\frac{1}{4}$ (b) $\frac{1}{4}$ (c) 1 (d) $-\frac{3}{4}$	**1**
Q.2)	A number which can be expressed as $\frac{p}{q}$, where p and q are integers and q≠0 is a/an __. (a) natural number (b) whole number (c) integer (d) rational number	**1**
Q.3)	The greater number between $\frac{15}{20}$ and $\frac{35}{40}$ is _____. (a) $\frac{15}{20}$ (b) $\frac{35}{40}$ (c) Both are equal (d) none of these.	**1**
Q.4)	Multiplicative inverse of a negative rational number is_____. (a) a positive rational number (b) a negative rational number (c) 0 (d) 1	**1**
Q.5)	$\frac{x+y}{2}$ is a rational number _____ (a) Between x and y (b) Less than x and y both (c) Greater than x and y both (d) Less than x but greater than y.	**1**
Q.6)	The solution of the equation $ax + b = 0$ is _____. (a) $x = \frac{a}{b}$ (b) $x = -b$ (c) $x = \frac{-b}{a}$ (d) $x = \frac{-a}{b}$	**1**
Q.7)	If $8x - 3 = 25 + 17x$, then x is _____. (a) a fraction (b) a rational number (c) an integer (d) cannot be solved.	**1**
Q.8)	Solve for y : $10y + 5 = 25 - 15y$. (a) $\frac{2}{5}$ (b) $\frac{5}{4}$ (c) $\frac{4}{5}$ (d) $\frac{3}{5}$.	**1**
Q.9)	The value of x, for which the expressions 3x – 4 and 2x + 1 become equal, is_____. (a) -3 (b) 0 (c) 5 (d) 1	**1**

Q.10)	A linear equation in one variable has_____. (a) only one solution (b) two solutions (c) more than two solutions (d) no solution.	**1**
Q.11)	The additive inverse of $-\frac{7}{19}$ is _____. (a) $-\frac{7}{19}$ (b) $\frac{7}{19}$ (c) $\frac{19}{7}$ (d) $-\frac{19}{7}$	**1**
Q.12)	For which of the following figures, diagonals are equal? (a) Trapezium (b) Rhombus (c) Parallelogram (d) Rectangle.	**1**
Q.13)	If the three angles of a quadrilateral are 70°, 90° *and* 120°, then the measure of the fourth angle is _____. (a) 100° (b) 75° (c) 80° (d) 60°	**1**
Q.14)	Which of the following quadrilaterals has two pairs of adjacent sides equal and diagonals intersecting at right angles? (a) square (b) rhombus (c) kite (d) rectangle.	**1**
Q.15)	Which of the parallelograms has all sides equal and diagonals bisect each other at right angle? (a) square (b) rectangle (c) rhombus (d) trapezium.	**1**
Q.16)	The sides of a pentagon are produced in order. Which of the following is the sum of its exterior angles? (a) 540° (b) 180° (c) 720° (d) 360°	**1**
Q.17)	Which of the following is a formula to find the sum of interior angles of a quadrilateral of n-sides? (a) $\frac{n}{2} \times 180°$ (b) $\frac{(n+1)}{2} \times 180°$ (c) $\frac{(n-1)}{2} \times 180°$ (d) (n − 2) × 180°	**1**
Q.18)	The value of $\sqrt{248+\sqrt{52+\sqrt{144}}}$ is (a) 14 (b) 12 (c) 16 (d) 13	**1**
	DIRECTION: In the question number 11, a statement of assertion (A) is followed by a statement of Reason (R). Choose the correct option.	**1**
Q.19)	**Assertion (A):** Natural numbers are closed under addition. **Reason (R) :** A rational number is a number is a number that is in the form of $\frac{p}{q}$, where p and q are integer , and q is not equal to 0. (a) Both A and R are true, and R is the correct explanation of A. (b) Both A and R are true, but R is not the correct explanation of A. (c) A is true but R is false. (d) A is false but R is true.	
Q.20)	**Assertion (A):** The one's digit in the cube root of the cube number 1728 is 6. **Reason (R)** : The cube root of a number is the factor that we multiply by itself three times to get that number. (a) Both A and R are true, and R is the correct explanation of A. (b) Both A and R are true, but R is not the correct explanation of A. (c) A is true but R is false. (d) A is false but R is true.	**1**
	SECTION B	
	Section B consists of 5 questions of 2 marks each.	
Q.21)	The probability that it will not rain tomorrow is 0.25. What is the probability that it will rain tomorrow.	**2**

<table>
<tr><td>Q.22)</td><td>A bag has 4 red balls and 2 yellow balls. (The balls are identical in all respects other than colour) a ball is drawn from the bag without looking into the bag. What is the probability of getting a red ball? Is it more or less than getting a yellow ball?</td><td>2</td></tr>
<tr><td>Q.23)</td><td>Find the square of the number without actual multiplication. : a) 42
OR
Find the square root of the following numbers by prime factorization Method.:
a) 5929.</td><td>2</td></tr>
<tr><td>Q.24)</td><td>Is 68600 a perfect cube? If not, find the smallest number by which 68600 must be multiplied to get a perfect cube?
OR
Find the cube root of the following number by prime factorization method. :a) 110592.</td><td>2</td></tr>
<tr><td>Q.25)</td><td>An item marked at ₹ 840 is sold for ₹ 714. What is the discount and discount percent?</td><td>2</td></tr>
<tr><td></td><td>SECTION C</td><td></td></tr>
<tr><td></td><td>Section C consists of 6 questions of 3 marks each</td><td></td></tr>
<tr><td>Q.26)</td><td>Numbers 1 to 10 are written on ten separate slips(one number on one slip), kept in a box and mixed well. One slip is chosen from the box without looking it. What is the probability of
i) getting a number 6? (ii) getting a number less than 6? (iii) getting 1-digit number?
OR
When a die is thrown, list the outcomes of an event of getting
i) a prime number? (ii) not a prime number? (iii) a number greater than 5?</td><td>3</td></tr>
<tr><td>Q.27)</td><td>Write a Pythagorean triplet whose one member is 16.
OR
The students of class VIII of a school donated ₹ 2401 in all, for Prime Minister's National Relief Fund. Each student donated as many rupees as the number of students in the class. Find the number of students in the class.</td><td>3</td></tr>
<tr><td>Q.28)</td><td>Parikshit makes a cuboid of plasticine of sides 5 cm, 2 cm, 5cm. How many such cuboids will he need to form a cube?</td><td>3</td></tr>
<tr><td>Q.29)</td><td>Find the cube root of 13824 by prime factorization method.</td><td>3</td></tr>
<tr><td>Q.30)</td><td>I purchased a hairdryer for ₹ 5,400 including 8 % VAT. Find the price before VAT was added.</td><td>3</td></tr>
<tr><td>Q.31)</td><td>Salim bought an article for ₹ 784 which included GST of 12 %. What is the price of the article before GST was added?</td><td>3</td></tr>
<tr><td></td><td>SECTION D</td><td></td></tr>
<tr><td></td><td>Section D consists of 4 questions of 5 marks each.</td><td></td></tr>
<tr><td>Q.32)</td><td>The number of students in a hostel, speaking different languages is given below. Display the data in a pie chart.
<table>
<tr><td>Language</td><td>Hindi</td><td>English</td><td>Marathi</td><td>Tamil</td><td>Bengali</td><td>Total</td></tr>
<tr><td>Number of students</td><td>40</td><td>12</td><td>9</td><td>7</td><td>4</td><td>72</td></tr>
</table></td><td>5</td></tr>
</table>

Q.33)	A gardener has 1000 plants. He wants to plant these in such a way that the number of rows and the number of columns remains same. Find the minimum number of plants he needs more for this. **OR** Find the square root of the following decimal number. : a) 51.84	**5**
Q.34)	Difference of two perfect cubes is 189. If the cube root of the smaller of the two numbers is 3, find the cube root of the larger number.	**5**
Q.35)	The population of a place increased to 54,000 in 2003 at a rate of 5 % per annum (i) find the population in 2001. (ii) What would be its population in 2005? **OR** Find Compound Interest on ₹ 12600 for 2 years at 10% per annum compounded annually.	**5**
	SECTION E	
Q.36)	The pie chart given below shows the result of a survey carried out to find the modes of travel used by the children to go to school. Study the pi chart and answer the questions that follow. a) What is the most common mode of transport? b) What fraction of children travel by car? c) How many children use taxi to travel to school? **OR** c) By which two modes of transport are equal number of children travelling?  	**1** **1** **2**
Q.37)	During dance practice in school 6570 students of different schools are arranged in rows such that the number of students in each row is equal to the number of rows. In doing so, the instructor finds out that 9 children are left out. Using this, answer the following: a) What is the number of students forming a square? b) How many students were left out in the arrangement? c) Find the number of children in each row of the square? **OR** c) If 154 were added to the number of students and arranged in rows such that the number of students in each row is equal to the number of rows , what will be the number of rows ?	**1** **1** **2**
Q.38)	In primary school, the parents were asked about the number of hours they spend per day in helping their children to do homework. There were 90 parents who help for $\frac{1}{2}\ h$ to $1\frac{1}{2}\ h$. The distribution of parents according to the time for which, they helped is given in the adjoining figure, 20% helped for more than $1\frac{1}{2}\ h$ per day. 30% helped for 1 h to $1\frac{1}{2}\ h$; 50% did not help at all. Using this, answer the following: a) How many parents were surveyed? b) How many said that did not help? c) How many said that they helped for more than $1\frac{1}{2}\ h$.? **OR** c) How many said that they helped for 1 h to $1\frac{1}{2}\ h$.?	**1** **1** **2**