STEINMONT PUBLIC SCHOOL, ARAYANGAD

PRE- MID TERM EXAMINATION

MATHEMATICS

CLASS VIII

TIME: 2 HOURS **MAX.MARK: 60**

GENERAL INSTRUCTIONS:

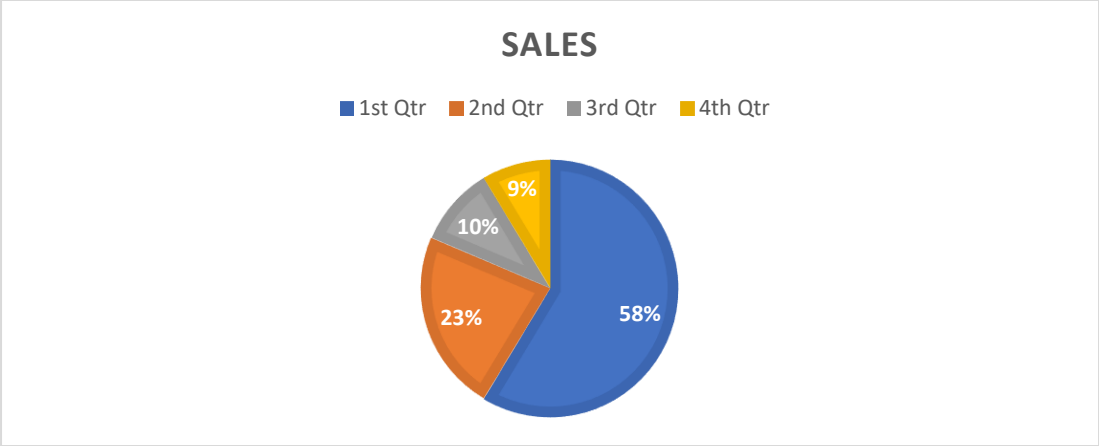
a) All questions are compulsory.
b) The question paper consists of 30 questions divided into 4 sections A, B, C, & D.
c) Section A comprises of 15 questions of 1 mark each. Section B comprises of 5 questions of 2 marks each. Section C comprises of 5 questions of 3 marks each. Section D comprises of 5 questions of 4 marks each.
d) There is no overall choice. However internal choices have been in two questions of 1 mark each, two questions of 2 marks each, two questions of 3 marks each and one question of 4 marks each. You have to attempt only of the alternatives in all such questions.
e) Use of calculators is not permitted.

SECTION A

1) Which of the statement is false?
    a) Natural numbers are closed under addition
    b) Whole numbers are closed under addition
    c) Integers are closed under addition
    d) Rational numbers are not closed under addition
2) x is an odd number. The largest odd number preceding x is
    a) x – 1 b) x – 2 c) x – 3 d) x – 4
3) The square of which of the following numbers will be odd?
    a) 42 b) 54 c) 66 d) 81
4) The one's digit of the cube of the number 123 is
    a) 3 b) 6 c) 9 d) 7
5) 0 is not
    a) a natural number
    b) a whole number
    c) an integer
    d) a rational number

(Q.6 – Q. 10) Answer the Following:

Go through the given circle graph and answer the questions given below:



6) The central angle for sector 1st is?
7) The central angle for sector 2nd is?
8) The central angle for sector 3rd is?
9) The central angle for sector 4th is?
10) What is the difference between the central angles for sector 2nd and sector 4th ?

(Q.11 – Q.15) Fill in the Blanks:

11) The data in an unorganised form is called ----------

12) A number ending in an odd number of ---------- is never a perfect square.

13) The difference of two rational numbers is ----------

14) In the class interval 20 – 30, 20 is the ----------

15) Th additive inverse of $\frac{-3}{7}$ is ----------

SECTION B

16) Find the multiplicative inverse of the following:

a) $\frac{-5}{8} \times \frac{-3}{7}$ b) $-1 \times \frac{-2}{5}$

17) Solve the following:

a) $\frac{2x}{3} + 1 = \frac{7x}{15} + 3$ b) $2y + \frac{5}{3} = \frac{26}{3} - y$

18) Find the square of the following numbers:

a) 86 b) 46

OR

Which of the following numbers are perfect cubes:

a) 216 b) 128

19) When a die is thrown, list the outcomes of an event of getting

i) (a) a prime number

(b) not a prime number

ii) (a) a number greater than 5

(b) a number not greater than 5

20) Sum of two numbers is 95. If one exceeds the other by 15, find the numbers.

OR

If two angles are complementary and one angle is 10° greater than the other, then find the smaller angle of the two.

SECTION C

21) Find the rational numbers between $\frac{-2}{5}$ and $\frac{1}{2}$

22) If you subtract $\frac{1}{2}$ from a number and multiply the result by $\frac{1}{2}$, you get $\frac{1}{8}$. What is the number?

OR

The perimeter of a rectangular swimming pool is 154 m. Its length is 2 m more than twice its breadth. What are the length and breadth of the pool?

23) Find the squares roots of 100 and 169 by the method of repeated subtraction.

OR

Find the square roots of 729 and 400 by the method of prime factorisation.

24) Find the smallest number by which each of the following numbers must be divided to obtain a perfect cube.

a) 81 b) 128

25) Using appropriate properties find:

a) $-\frac{2}{3} \times \frac{3}{5} + \frac{5}{2} - \frac{3}{5} \times \frac{1}{6}$ b) $\frac{2}{5} \times \frac{-3}{7} - \frac{1}{6} \times \frac{3}{2} + \frac{1}{14} \times \frac{2}{5}$

SECTION D

26) I have a total of ₹ 300 in coins of denomination ₹ 1, ₹ 2 and ₹ 5 the number of ₹ 2 coins is 3 times the number of ₹ 5 coins. The total number of coins is 160. How many coins of each denomination are with me?

OR

Sum of the digits of a two-digit number is 9. When we interchange the digits, it is found that the resulting new number is greater than the original number b 27. What is the two- digit number?

27) The weekly wages of 30 worker in a factory are:

830, 835, 890, 810, 835, 836, 869, 845, 898, 890, 820, 860, 832, 833, 855, 845, 804, 808, 812, 840, 885, 835, 835, 836, 878, 840, 868, 890, 806, 840.

Draw a histogram for the data and answer the following questions:

a) Which group has the maximum number of workers?
b) Ho many workers earn ₹ 850 and more?
c) How many workers earn less than ₹ 850?

28) The students of class VIII of a school donated ₹ 2401 in all, for PM'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.

29) Find the cube roots of the following numbers b prime factorisation method:

a) 13824 b) 110592

30) Represent the following rational numbers on the number line:

a) $\frac{-5}{6}$ b) $\frac{3}{7}$ c) $\frac{-2}{7}$ d) $\frac{-8}{11}$