INDIAN SCHOOL SOHAR No. of printed pages: 3

TERM I EXAMINATION – (2018-2019)

Class VIII **MATHEMATICS** Max. Marks: 80

Date: 23.9.2018 Duration: 3hrs

General Instructions:

All questions are compulsory.

This question paper consists of 30 questions divided into four sections A, B, C & D. Section A comprises of 6 questions of 1 mark each, Section B comprises of 6 questions of 2 marks each, Section C comprises of 10 questions of 3 marks each & Section D comprises of 8 questions of 4 marks each.

There is no overall choice in the paper. However an internal choice is provided in four questions of 3 marks and three questions of 4 marks.

SECTION A

1. What is the product of a rational number and it's reciprocal?
2. What is the solution of the equation x − 4 = 7?
3. The measure of the exterior angle of a regular polygon is 36°. What is the measure of its each interior angle?
4. Alphabets 'A to Z' are written on separate slips (one alphabet on one slip), kept in a box and mixed well. One slip is chosen from the box without looking into it. What is the probability of getting a vowel?
5. How many natural numbers lie between 299^2 and 300^2?
6. What will be the one's digit in the cube of 6127?

SECTION B

7. Multiply $\frac{7}{2}$ by the reciprocal of $5\frac{1}{4}$.
8. Solve $\frac{15}{4} - 7x = 9$
9. Find the number of sides of a regular polygon with each exterior angle has a measure of 45°.
10. A bag contains 3 red and 5 green and 4 blue balls. A ball is drawn at random. What is the probability of getting a red ball?
11. Find the square of 69 without actual multiplication.
12. Find the cube of (−7).

SECTION C

13. Represent $\frac{-2}{7}$ and $\frac{3}{7}$ on a number line.

OR

Find three rational numbers between (−2) and $\frac{1}{2}$.

14. Solve: $\frac{m-1}{3}-\frac{m-2}{4}=1$

OR

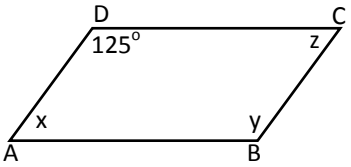
Solve: $\frac{x}{2}-\frac{1}{5}=\frac{x}{3}+\frac{1}{4}$

15. Two numbers are such that the ratio between them is 3:5. If each is increased by 10, the ratio between the new numbers so formed is 5:7. Find the original numbers.

16. In the figure,

ABCD is a parallelogram.

Find x, y and z.

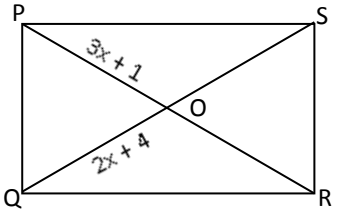


17. In the figure, PQRS is a rectangle.

Diagonals PR and QS intersect at O.

OP = 3x + 1 and OQ = 2x + 4.

Find the value of x.



18. Construct a quadrilateral ABCD, where AB = 4.5cm, BC = 5.5cm, CD = 4cm, AD = 6cm and AC = 7cm.

OR

Construct a rhombus whose diagonals are 5.2cm and 6.4cm.

19. Find the Pythagorean triplet whose one member is 15.

20. Find the square root of 7744 by prime factorization.

OR

Find the square root of 7921 by division method.

21. Evaluate $\sqrt{\frac{441}{1225}}$

22. A PT teacher wants to arrange maximum possible number of 6000 students in a field such that the number of rows is equal to the number of columns. Find the number of rows if 71 were left out after arrangement.

SECTION D

23. Find using distributive property: $\left[\frac{7}{5}x\left(\frac{-3}{4}\right)\right]+\left[\frac{5}{3}x\frac{7}{5}\right]$

24. There are 180 multiple choice questions in a test. If a candidate gets 4 marks for every correct answer and for every unattempted or wrongly answered question one mark is deducted from the total score of correct answers. If a candidate scored 450 marks in the test, how many questions did he answer correctly?

OR

The sum of the digits of a two digit number is 15. If the number formed by reversing the digits is less than the original number by 27, find the original number.

25. Construct a quadrilateral ABCD with AB = 4cm, BC = 5cm, CD = 4.5cm, $\angle B = 60^o$ and $\angle C = 90^o$.

OR

Construct a parallelogram with one of the sides is 5.2cm and the diagonals are 6cm and 6.4cm.

26. The marks obtained a by 40 students of class VIII in an examination are given below.

18, 8, 12, 0, 22, 16, 12, 5, 23, 2, 16, 23, 2, 10, 20, 12, 9, 7, 6, 24,

3, 5, 13, 21, 13, 15, 20, 24, 1, 7, 21, 16, 13, 18, 23, 2, 11, 18, 17, 16.

Present the data in the form of a frequency distribution table using the same class size, one such class being 15 – 20 (where 20 is not included).

27. Construct a histogram for the following data:

Monthly school fee	30-35	35-40	40-45	45-50	50-55	55-60	60-65
Number of schools	6	8	10	12	10	8	6

28. The number of students in class VIII speaking different languages is given below. Present the data in a pie – chart.

Language	Hindi	Malayalam	Tamil	English	Bengali
Number of students	10	8	7	6	5

29. Find the least number which must be added to 4488 to get a perfect square. Also find the square root of the perfect square so obtained.

30. Find the cube root of 456533 by prime factorization.

OR

Three numbers are in the ratio 2:3:4. The sum of these in cubes is 33957. Find the numbers.