Name: _____Sec: ____ Roll No. _____

BURNPUR RIVERSIDE SCHOOL, BURNPUR
ANNUAL EXAMINATION : (2020-21)
MATHEMATICS
CLASS: VII

Time: 3 Hrs. **Maximum Marks: 80**

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General Instructions:
1. All questions are compulsory.
2. Section A contains 16 questions, each carrying 1 mark.
3. Section B contains 6 questions, each carrying 2 marks.
4. Section C contains 8 questions, each carrying 3 marks.
5. Section D contains 7 questions, each carrying 4 marks.

SECTION-A

1. The simple interest at 6% per annum for 2 years on a sum of [1]
   Rs 6400 will be (a) Rs 768 (b) Rs 886 (c)Rs 700 (d) none of these

2. If $\frac{x}{6} = \frac{7}{-3}$ then the value of x is (a) -14 (b) 14 (c) 21 (d) -21 [1]

3. If $(2n + 5) = 3(3n - 10)$ then $n =$? (a)5   (b)3   (c)$\frac{2}{5}$ (d)$\frac{2}{3}$ [1]

4. If A:B = 5:8 and B:C =18:25 then A:C =? [1]
   (a)$9: 20$ (b) 1:5 (c) 4:9 (d) 5:18

5. In a right angled triangle, the square of the hypotenuse is equal to [1]
   the _____ of the squares of the other two sides.
   (a)sum (b) product (c) half (d) none of these

6. The distance between two parallel lines is _____ everywhere. [1]
   (a)same (b)different (c) not same

7. The area of a square is 200 cm^2. The length of its diagonal is [1]
   (a)10 cm   (b) 20 cm   (c) $10\sqrt{2}$ (d) 14.1

8. $1.1 \times 0.1 \times 0.01 =$? [1]
   (a)0.011   (b) 0.0011 (c) 0.11   (d) none of these

9. If two figures have exactly the same shape and size they are said to [1]
   be _____

10. If 42 men can dig a trench in 14 days , then 1 man can dig it in [1]
    _____ days.

11. The additional money paid by the borrower is called the _____ [1]

12. Reciprocal of -6 is_____ [1]
13. What should be subtracted from 0.1 to get 0.03? [1]

OR

2.73 ÷ 1.3 =?

14. Two complementary angles differ by $10°$. Find the larger angle. [1]
15. Express the ratio 75:125 in simplest form. [1]

OR

Find the ratio of 2 m to 24 cm.

16. The base and height of a triangle are 12 m and 8 m respectively. [1]
Find its area.

SECTION-B

17. A birthday cake is circular in shape. This cake is equally divided [2]
among 6 friends where radius of the cake is 60 cm.
(i)find the area of each piece.
(ii) which value is depicted by the friends?

18 Find the simple interest and amount when Principal = Rs 4500, [2]
rate= 8% per annum and time = 73 days.

OR

Find the time when Principal = Rs 5000 , amount = Rs 6450, and
rate =12% per annum.

19 Simplify : $\frac{7}{15} \div \frac{2}{3}$ [2]
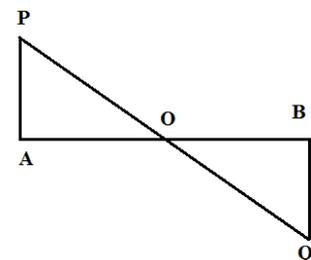
OR

Subtract $\frac{3}{4}$ from $\frac{2}{3}$

20 The sum of two consecutive multiples of 3 is 69. Find them. [2]
21 The first three terms of a proportion are 3,5 and 21 respectively. [2]
Find the fourth term.
22 Find the angles of a triangle which are in the ratio 3:4:5 [2]

SECTION-C

23 [3]

In the given figure, PA $\perp$ AB, QB$\perp$ AB
and PA = QB. Prove that $\Delta OAP \cong \Delta OBQ$.

OR

Prove that the bisector of the vertical angle of an isosceles triangle
bisects the base at right angles.

24 Construct a right angled triangle having hypotenuse of length [3]
5.6cm and one of whose acute angle measures 30°

25 The areas of two circles are in the ratio 25:36 . Find the ratio of [3]
their circumferences.

<div align="center">OR</div>

A racetrack is in the form of a ring whose inner circumference is
264 m and the outer circumference is 308 m. Find the width of the
track.

26 The marks obtained by a student in various subjects in first term [3]
and the second term out of 100 in each test are given below. Draw
a double bar graph choosing appropriate scale.

Subject	English	Hindi	Maths	science	Social science
Marks obtained in 1st term	65	70	88	82	71
Marks obtained in 2nd term	67	68	94	85	76

27 In the adjoining figure, it is given [3]
that AB∥CD,

$\angle$ABO=50°,$\angle$CDO= 40°
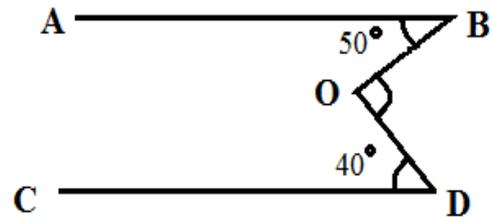
Find the measure of $\angle$BOD

28 One side of a triangle is produced and the exterior angle so formed [3]
is 120° . If the interior opposite angles be in the ratio 3:5, find the
measure of each angle of the triangle.

<div align="center">OR</div>

The two legs of a right triangle are equal and the square of its
hypotenuse is 50. Find the length of each leg.

29 What number must be added to each of the numbers 10,18,22,38 to [3]
get the numbers which are in proportion?

30 What should be subtracted from $\frac{-2}{3}$ to get $\frac{5}{6}$? [3]

<div align="center">**SECTION -D**</div>

31 A wire in the form of a rectangle 18.7cm long and 14.3 cm wide is [4]
reshaped and bent into the form of a circle. Find the radius of the
circle so formed.

32   The ages of Amit and Sumit are in the ratio 5:7. Eight years ago   [4]
     their ages were in the ratio 7:13. Find their present ages.

33   Two poles of heights 9 m and 14 m stand upright on a plane   [4]
     ground. If the distance between their feet is 12 m, find the distance
     between their tops.

34   Each side of a polygon is 2.9 cm in length and its perimeter is 17.4   [4]
     cm. How many sides does the polygon have?

                                OR

     Mr Bose distributed Rs 1840 equally among NCC cadets for
     refreshment. If each cadet received Rs 28.75 how many cadets
     were there?

35   The extension in an elastic string varies directly as the weight hung   [4]
     on it. If a weight of 150g produces an extension of 2.8cm , what
     weight would produce an extension of 19.6cm.

                                OR

     A contractor has a workforce of 420 men who can finish a certain
     piece of work in 9 months. How many extra men must he employ
     to complete the job in 7 months?

36   Simple interest on a certain sum is $\frac{16}{25}$ of the sum. Find the rate   [4]
     percent and the time if both are numerically equal.

                                OR

     The simple interest on a certain sum for 3 years at 8% per annum is
     Rs 96 more than the simple interest on the same sum for 2 years at
     9% per annum. Find the sum.

37   A tree is broken at a height of 6m from the ground and its top   [4]
     touches the ground at a distance of 8m from the base of the tree.
     Find the original height of the tree.

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