

Bhavan's Tripura Vidyamandir
1st Terminal Examination: (2024-2025)

Class:- 7

Time:- 3 hours

Name of the student:

Subject: Mathematics

Total: - 80 Marks

Roll: Section:

Instructions-

- a) SECTION – A: Question No. 1 to 15 carries 1 mark each
- b) SECTION--B Question No.16 to 20 carries 1 marks each. **(CASE STUDY)**
- c) SECTION – C: Question No. 21 to 30 carries 2 marks each.
- d) SECTION – D: Question No. 31 to 38 carries 3 marks each
- e) SECTION – E: Question No. 39 to 42 carries 4 marks each

SECTION – A

- 1) A pair of integers whose sum is -7 is:
a) -2, -3 b) -3, -4 c) 1, 4 d) 3, 4
- 2) What is $\frac{1}{4}$ of 16?
a) 1 b) 2 c) 3 d) 4
- 3) The mode of the given set of numbers: 1, 1, 2, 4, 3, 2, 1, 2, 2, 4 is
a) 2 b) 3 c) 4 d) 1
- 4) If $10p = 100$, then 'p' is:
a) 1 b) 12 c) 10 d) 100
- 5) The equation for - *The sum of numbers x and 4 is 9* is:
a) $x+3=4$ b) $x+ 2=3$ c) $x+1=9$ d) $x+4=9$
- 6) the equation for : *The sum of three times x and 11 is 32* is:
a) $3x+11=32$ b) $4x+2=4$
c) $3 + x + 11=32$ d) $9+11x=32$
- 7) What is the measure of the complement of 65° ?
a) 26° b) 25° c) 28° d) 35°
- 8) If two angles are supplementary, then the sum of their measures is _____.
a) 90° b) 180° c) 270° d) 360°
- 9) How many medians can a triangle have?
a) 1 b) 2 c) 3 d) 4
- 10) How many altitudes can a triangle have?
a) 4 b) 3 c) 2 d) 1
- 11) Two angle of a triangle measure 90° and 30° . The measure of the third angle?
a) 90° b) 30° c) 60° d) 120°
- 12) How many line of symmetries are there in regular pentagon?
a) 2 b) 3 c) 4 d) 5
- 13) The angle of rotational symmetry of a square is _____.
a) 60° b) 90° c) 180° d) 360°
- 14) Solve the equation $\frac{x+14}{2} = 8$
a) -2 b) 2 c) -20 d) -8
- 15) A circle is symmetries about each one of its
a) Diameters b) chords c) sectors d) segment

SECTION-B (CASE STUDY)

A teacher explained about triangles and its parts and also explained about the classification of triangles based on sides and angles. He also showed how to name a triangle and its sides, angles and vertices. Then he asked the following questions to the students. You also answer the questions:

16) Side opposite to the vertex Q of ΔPQR :

- a) PR b) PQ c) QR d) SQ

17) Angle opposite to the side LM of ΔLMN

- a) $\angle N$ b) $\angle L$ c) $\angle M$ d) $\angle O$

18) Vertex opposite to the side RT of ΔRST

- a) S b) R c) T d) Q

19) The triangle whose measure of each angle is 60°

- a) Acute angled triangle b) Isosceles Triangle
c) Equilateral triangle d) Right angled triangle

20) Name the triangle in which base angles opposite to the equal sides are equal

- a) Isosceles triangle b) Right angled triangle
c) Obtuse angled triangle d) Scalene triangle

SECTION-C

21) Write a negative integer and a positive integer whose sum is -5.

22) Simplify: $2\frac{1}{5} \div 1\frac{1}{5}$

23) Solve: $10p + 10 = 100$

24) Find X : $-2(x + 3) = 8$

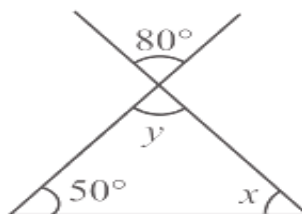
25) Solve $\frac{a}{5} = \frac{7}{15}$

26) Find the measures of the angles made by the intersecting lines at the vertices of an equilateral triangle.

27) Draw rough sketch of ΔABC in which BE is a median.

28) State Pythagoras property and name the triangle in which it applies.

29) Find the value of the unknowns x and y in the following figure

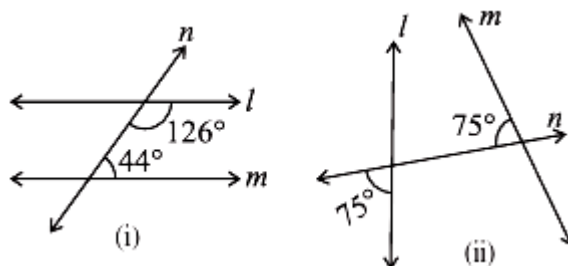


30) State the number of lines of symmetry for the following figure

- a) An equilateral triangle b) A rhombus

SECTION-D

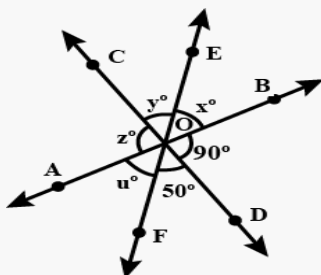
- 31) A rectangular sheet of paper is $12\frac{1}{2}$ cm long and $10\frac{2}{3}$ cm wide. Find its perimeter.
- 32) Raju's father's age is 5 years more than three times Raju's age. Find Raju's age, if his father is 44 years old.
- 33) Set up equations and solve them to find the unknown numbers in the following cases:
- Add 4 to eight times a number, you get 60.
 - One-fifth of a number minus 4 gives 3.
- 34) In the given figures below, decide whether 'l' is parallel to 'm'. State reasons also.



- 35) People of sundargram planted trees in a village garden. Some of the trees were fruit trees. The number of non-fruit trees were two more than three times the number of fruit trees. What was the number of fruit trees planted if the number of non-fruit trees planted was 77?
- 36) Name the quadrilaterals which have both line and rotational symmetry of order more than 1.
- 37) Is there a triangle whose sides have lengths 10.2 cm, 5.8 cm and 4.5 cm?
- 38) The lengths of two sides of a triangle are 12 cm and 15 cm. between what two measures should the length of the third side fall?

SECTION-E

- 39) Sachin scored twice as many runs as Rahul. Together their runs fell two short of a century. How many runs did each one score?
- 40) In the figure, three coplanar lines intersect at a point O, forming angles as shown in the figure. Find the values of x, y, z and u.



- 41) A tree is broken at a height of 5 m from the ground and its top touches the ground at a distance of 12 m from the base of the tree. Find the original height of the tree.
- 42) Can we have a rotational symmetry of order more than 1 whose angle of rotation is
- 45°
 - 17° ? Give reasons for both (i) and (ii).

[1+1+2]