

U-53-A

SET - I

SUMMATIVE ASSESSMENT - I - 2018-2019



MATHEMATICS - PAPER-II

(English Medium)

PART - A & B

Class : IX

(Max. Marks : 40)

Time : 2.45 Hrs.

Instructions :

1. Question paper contains 2 parts (Part A & B).
2. Part - A & B should be given at the beginning of the exam only.
3. 15 minutes is allotted for reading the question paper (Part A & B) in addition to 2.30 hours for writing the answers.
4. Part-A answers should be written in a separate answer book. Write the answers to the questions under Part-B on the question paper itself.
5. There are three Sections in Part - A.
6. Answer all the questions.
7. Every answer should be visible and legible.
8. There is internal choice in Section - III

Marks : 30

PART-A

Section - I

Note 1. Answer all the Questions.

2. Each Question carries 1 Mark.

$4 \times 1 = 4$

1. If the mean of 20, 24, 36, 26, 34 and K is 30 then find K.
2. The position of (3, 4) and (4, 3) are not the same on graph. Why?
3. Write converse of the theorem "In $\triangle ABC$, if $AB = AC$ then $\angle C = \angle B$ ".
4. The ratio of consecutive angles of a parallelogram is 2 : 3. Find the angles.

Section - II

Note 1. Answer all the Questions.

2. Each Question carries 2 Marks

$5 \times 2 = 10$

5. Find the median of the data.

| | | | | | |
|-----------------|----|----|----|----|---|
| Marks | 15 | 20 | 10 | 25 | 5 |
| No. of students | 10 | 8 | 6 | 4 | 1 |

6. D, E and F are midpoints of the sides of triangle ABC respectively. If $AB = 8\text{cm}$, $BC = 7.2\text{cm}$ and $AC = 6\text{cm}$ then find the perimeter of $\triangle DEF$.



7. $\triangle ABC$ and $\triangle DBC$ are two isosceles triangles on the same base BC (see figure). Show that $\angle ABD = \angle ACD$.



8. What is a cartesian plane? Explain with a diagram.
9. Give any two examples for each from your daily life to find
- (i) area of triangle
- (ii) area of rectangle

Section - III

Note 1. Answer all the Questions.

2. Each Question carries 4 Marks.

3. Each question has internal choice.

$$4 \times 4 = 16$$

10. Find the Mean of the following data in Deviation Method.

| | | | | | | |
|----------------|----|----|----|----|-----|-----|
| Weight (in kg) | 50 | 65 | 75 | 90 | 110 | 120 |
| No. of parcels | 25 | 34 | 38 | 40 | 47 | 16 |

(OR)

If the Mean of the following data is 20.6, find the missing frequency 'P'

| | | | | | |
|---|----|----|----|----|----|
| x | 10 | 15 | 20 | 25 | 35 |
| f | 3 | 10 | 25 | P | 5 |

11. In $\triangle ABC$, E and F are mid points of sides AB and AC respectively then prove that

(i) $EF \parallel BC$ and (ii) $EF = \frac{1}{2} BC$

(OR)

In Parallelogram ABCD, P and Q are any two points lying on the sides DC and BC respectively. Show that $ar(\triangle APB) = ar(\triangle AQD)$



12. Prepare an ungrouped frequency distribution for the following grades obtained by 30 students in SSC public examination using tally marks.

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| A_1 | A_1 | B_2 | B_2 | A_1 | B_2 | B_1 | A_2 | A_2 | B_1 |
| B_2 | A_2 | B_1 | A_2 | A_2 | B_1 | B_2 | B_1 | A_2 | A_1 |
| A_1 | B_2 | B_1 | B_1 | A_1 | A_2 | B_1 | B_2 | B_1 | A_2 |

(OR)

Read the following table and answer the following questions given below.

| Points | A | B | C | D | E | F | G | H |
|-------------|--------|--------|---------|----------|--------|--------|--------|---------|
| Coordinates | (2, 1) | (0, 5) | (3, -2) | (-2, -2) | (1, 2) | (3, 0) | (0, 0) | (-2, 0) |

- (i) The point belongs to Q_2
- (ii) The abscissa of the point C
- (iii) The point lie on x-axis
- (iv) The coordinates of origin
- (v) The point satisfy $x > 0, y < 0$
- (vi) The point satisfy $x - y = 1$
- (vii) The position of point B
- (viii) The Quadrant contain (3, -2)

13. Plot at least five points on a graph sheet each having the sum of its coordinates is equal to 6. What do you observe? Write your inference.

(Hint : $(-2, 8)$, $(1, 5)$, etc)

(OR)

Construct a triangle ABC with measures $AB = 5\text{cm}$, $BC = 4.2\text{ cm}$ and $AC = 6.5\text{cm}$. Measure the angles. Write relationship between sides and angles.

Regd.No.

U-53-B

Marks:

SET - I**SUMMATIVE ASSESSMENT - I - 2018-2019****MATHEMATICS - PAPER-II****(English Medium)****Class - IX****Part - B****Marks : 10**

| | AS - I | | | | | AS - II | | | | | AS - III | | | AS - IV | | | AS - V | | Total |
|-------|--------|---|---|----|----|---------|---|---|----|-------|----------|---|-------|---------|---|-------|--------|-------|-------|
| Q.No | 1 | 5 | 6 | 10 | 12 | 14-19 | 2 | 7 | 11 | 20-21 | 3 | 8 | 22-23 | 4 | 9 | 24-29 | 13 | 30-33 | Grade |
| Marks | | | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | | | | | | | |

Name of the Student : Roll No. :

Note:

- Answer all the question in Part - B
- Each Question has 4 options. Write the capital letter indicating the answer in the given brackets.
- Marks are not awarded for over written or struck off answers.
- All questions carry equal marks.

- The mid value of the class 10-19 is ()
A) 14 B) 14.5 C) 15 D) 15.5
- For the given scores $\bar{x} = 12$ and $\sum x_j = 192$ then $n =$ ()
A) 12 B) 15.8 C) 16 D) 18
- The mode of the scores 12, 11, 12, 9, 10, 9, 12, is ()
A) 9 B) 10 C) 11 D) 12
- The area of triangle formed by the points (0, 0), (5, 0) and (0, 5) is ()
A) 5 sq. units B) 7.5 sq. units C) 10 sq. units D) 12.5 sq. units

18. The exterior angle of an equilateral triangle is ()
 A) 30° B) 60° C) 90° D) 120°
19. The opposite angles of a parallelogram are $(3x-20)^\circ$ and $(x+70)^\circ$ then the value of x ()
 A) 60° B) 55° C) 45° D) 30°
20. Which one is not a congruency axiom of triangle ()
 A) S.S.S B) S.A.S C) A.S.A D) A.A.A
21. "A quadrilateral can be a rectangle" if the following condition is satisfied. ()
 A) when diagonals are equal B) when one angle is right angle
 C) Anyone of A or B D) Both A and B
22. The mathematician, who developed Coordinate Geometry ()
 A) Euclid B) Ronald Fisher
 C) Pythagorus D) Rene Descartes
23. The equation of x-axis is ()
 A) $y = 0$ B) $x = 0$ C) $y = x$ D) $x + y = 1$
24. If $x < 0$ and $y > 0$ then $(-x, y)$ belongs to which Quadrant ()
 A) Q_1 B) Q_2 C) Q_3 D) Q_4
25. The figure formed by joining the mid-points of sides of parallelogram ()
 A) Rhombus B) Square C) Parallelogram D) Rectangle
26. ABCD is a parallelogram. \overline{AO} and \overline{BO} are bisectors of $\angle A$ and $\angle B$ then $\angle AOB =$ ()
 A) 90° B) 120°
 C) 180° D) 360°



27. Which one of the following is an example for a primary data ()
- A) Temperatures of a place during last 10 years
 B) Mid day meals records of a school in a month
 C) Literacy rate of various states in the year 2001
 D) List of absentee students of a day in 9th class

28. If the mean height of 3 boys is 142cm and the mean height of another 7 students is 145cm, then the mean height of 10 students ()
- A) 144cm B) 144.1cm C) 144.2cm D) 144.4cm

29. The median of rational numbers $\frac{1}{2}$, $\frac{2}{3}$, $\frac{5}{6}$, $\frac{1}{4}$ and $\frac{3}{5}$ ()
- A) $\frac{1}{2}$ B) $\frac{3}{5}$ C) $\frac{2}{3}$ D) $\frac{5}{6}$

30. Which of the points lie on y-axis ()
- A) (2, 0), (3, 0) B) (1, 2), (2, 2)
 C) (0, -2), (0, 2) D) (-5, 3), (2, 3)

31. Which congruency property is related to satisfy $\triangle ABC \cong \triangle ABD$ in the given figure ()
- A) S.A.S B) A.S.A
 C) S.S.S D) R.H.S



32. In any $\triangle ABC$, D is a point on BC such that $\text{ar}(\triangle ABD) = \text{ar}(\triangle ADC)$ then \overline{AD} represents ()
- A) Altitude B) Median
 C) Angle bisector D) Perpendicular Bisector

- 33) Which of the following pair of triangles have the same base and lie between the same parallels in the given figure ()



- A) $\triangle AOB$ and $\triangle COD$ B) $\triangle AOD$ and $\triangle BOC$
 C) $\triangle ABC$ and $\triangle ABD$ D) $\triangle ABC$ and $\triangle ADC$