

U-52-A

SET - I

SUMMATIVE ASSESSMENT - I - 2018-2019

MATHEMATICS - PAPER-I

(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 × 1 = 4

1. Simplify $(25)^{\frac{3}{2}} \times (625)^{\frac{1}{4}}$
2. If 2 is a zero of the polynomial $P(x) = 4x^2 - 3x + 5a$ then find the value of a.
3. $\angle POR$ and $\angle QOR$ is a linear pair. If $\angle POR = 3x$ and $\angle QOR = (2x + 10)^\circ$ then find the value of x.
4. Define conjecture ? Give an example.

Section - II

Note 1. Answer all the Questions

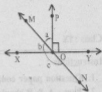
2. Each Question carries 2 Marks

5 × 2 = 10

5. An exterior angle of a triangle is 110° and one of the interior opposite angle is 30° . Find the other two angles of the triangle.

6. If $x + a$ is a common factor of $f(x) = x^2 + x - 6$ and $g(x) = x^2 + 3x - 18$ then find the value of a .
7. If $a + b = 5$ and $a^2 + b^2 = 11$ then prove that $a^4 + b^4 = 20$

8. Lines \overline{XY} and \overline{MN} intersect at O . If $\angle POY = 90^\circ$ and $a : b - 2 : 3$ find $\angle c$.



9. Write any two postulates of Euclid's Geometry.

Section - III

Note 1. Answer all the Questions.

2. Each Question carries 4 Marks.

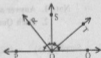
3. Each question has its internal choice.

$4 \times 4 = 16$

10. (a) If $\frac{5+2\sqrt{3}}{7+4\sqrt{3}} = a + b\sqrt{3}$, then find the values of a and b .

(OR)

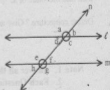
- (b) In the adjacent figure, ray OS stands on line POQ . \overline{OR} , \overline{OT} are bisectors of $\angle POS$ and $\angle SOQ$ respectively. If $\angle POS = x^\circ$ then find $\angle ROT$.



11. (a) Factorise $x^3 + 13x^2 - 32x + 20$

(OR)

- (b) $l \parallel m$ and 'n' is transversal. If $\angle b = (3x - 10)^\circ$ and $\angle h = (5x - 30)^\circ$ then determine all the angles.



12. (a) In $\triangle ABC$, the sides AB, AC are produced to E, D . The angle bisectors of $\angle CBE$ and $\angle BCD$ meet at 'O'. Then prove that

$$\angle BOC = 90^\circ - \frac{1}{2} \angle BAC$$



(OR)

- (b) If both $(x-2)$ and $\left(x-\frac{1}{2}\right)$ are factors of $Px^2 + 5x + r$, show that $P = r$.
13. (a) Visualise $4.6\bar{7}$ on number line upto 3 decimal places, using successive magnification.

(OR)

- (b) Represent $-\sqrt{3}$ and $\sqrt{3}$ on number line.

Regd.No.

U-52-B

Marks:

SET - I**SUMMATIVE ASSESSMENT - I - 2018-2019****MATHEMATICS - PAPER-I**

(English Medium)

Class - IX

Part - B

Marks : 10

	AS - I					AS - II			AS - III			AS - IV		AS - V		Total Grade			
Q.No	1	2	5	6	10	11	14-17	7	12	18-21	4	9	22-23	3	8		24-29	13	30-33
Marks																			
Total																			

Name of the Student : Roll No. :

Note:

1. Answer all question in Part - B
2. Each Question has 4 options. Write the capital letter indicating the answer in the given brackets.
3. Marks will not be awarded for over written and struck off answers.
4. Each question carries $\frac{1}{2}$ mark.

14. If $x = \sqrt{5} + 2$ then the value of $x - \frac{1}{x}$ is ()

- A) $2\sqrt{5}$ B) 4 C) -4 D) $-2\sqrt{5}$

15. If $x + 1$ is a factor of polynomial $2x^2 + Kx$ then the value of K is ()

- A) -4 B) -2 C) 2 D) +4


16. from the adjacent figure value of x is ()



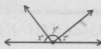
- A) 105° B) 60° C) 45° D) 30°

17. The value of $\left(\frac{1}{2}\right)^3 + \left(\frac{1}{3}\right)^3 - \left(\frac{5}{6}\right)^3$ is ()

- A) $\frac{5}{6}$ B) $\frac{5}{12}$ C) $-\frac{5}{36}$ D) $-\frac{5}{12}$

18. Statement-A : Adjacent angles are complementary ()
 Statement-B : Vertically opposite angles are equal
- A) Both A and B are true statements
 B) A is true and B is false
 C) A is false and B is true
 D) Both A and B are false
19. $x + 1$ is a factor of $x^2 + 1$ only if ()
- A) 'n' is an odd integer
 B) 'n' is an even integer
 C) 'n' is a negative integer
 D) 'n' is a positive integer
20. If $x^2 + 1$ has no zeroes then 'x' is a ()
- A) Real number
 B) Natural number
 C) Not Real
 D) Integer
21. The number of line segments in the given figure  ()
- A) 4
 B) 5
 C) 9
 D) 10
22. The number of books in Euclid's 'The Elements' ()
- A) 13
 B) 23
 C) 31
 D) 32
23. The conjugate angle of x is ()
- A) $90^\circ - x$
 B) $180^\circ - x$
 C) $270^\circ - x$
 D) $360^\circ - x$
24. If the length and breadth of a rectangular sheet are $\sqrt{5} + \sqrt{2}$ and $\sqrt{5} - \sqrt{2}$ units, then its area in sq. units ()
- A) $\sqrt{3}$
 B) $2\sqrt{5}$
 C) 3
 D) 7
25. The angle between two hands of a clock at 7 pm is ()
- A) Acute angle
 B) Right angle
 C) Straight angle
 D) Reflex angle

26. From the adjacent figure ()



$\frac{y}{x} = 5$ and $\frac{z}{x} = 4$ then the value of x is

- A) 8° B) 12° C) 15° D) 18°
27. The ratio of angles in a triangle is $1 : 2 : 3$ then the triangle is ()
- A) Equilateral B) Isosceles
C) Obtuse angled D) Right angled

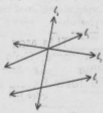
28. The volume of a cube is $x^3 - 6x^2 + 12x - 8$ then its edge in units ()
- A) $x - 4$ B) $x - 2$ C) $x + 2$ D) $x + 4$

29. In the adjacent figure, lines \overline{PQ} and \overline{RS} intersect each other at point 'O'. $\angle POR : \angle ROQ = 5 : 7$ then $\angle POS$ measure is ()



- A) 75° B) 105°
C) 150° D) 210°

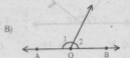
30. From the adjacent figure which is a transversal () (straight lines are not extended further)



- A) l_1 B) l_2 C) l_3 D) l_4

31. If a line 'n' falls on lines l and m such that the sum of interior angles of the same side of the transversal is less than 180° then the lines l and m are ()
- A) parallel B) coincidental lines
C) not parallel D) can't say

32. Which of the following pair of angles represents non-adjacent angles ()



- 33) Which pair of angles are alternate-exterior angles in the adjacent figure

- A) $(\angle 1, \angle 3)$
 B) $(\angle 1, \angle 5)$
 C) $(\angle 1, \angle 7)$
 D) $(\angle 4, \angle 8)$

