AMRITA VIDYALAYAM

ANNUAL EXAMINATION 2019 - 20

Class : VIII

Marks: 80 Time : 3 hrs

MATHEMATICS

General Instructions: Section A: 1 to 20 carries 1 mark each. Section B: 21 to 26 carries 2 marks each. Section C: 27 to 34 carries 3 marks each. Section D: 35 to 40 carries 4 marks each. Use of calculator is not permitted.

SECTION - A

1.	Which is the true statement?						
	a) $CP - Loss = SP$	b) SP - $CP = Loss$	c) SP - Loss = CP				
2.	(a + b) (a - b) =						
	a) $a^2 + 2ab + b^2$	b) $b^2 - a^2$	c) $a^2 - b^2$				
3.	Diagonals of rhombus bisect each other at						
	a) 0^0	b) 90 ⁰	c) 180 [°]				
4.	Additive inverse of 3/5 is						
	a) 0	b) -3/5	c) 5/3				
5.	$6x \times 2x^2 =$						
	a) $12x^2$	b) 12x ³	c) 8x ³				
6.	Sum of the interior angles of a regular polygon is						
	a) n \times 90	b) $(n - 2) \times 90$	c) $(n - 2) \times 180$				
7.	Lateral surface area of a cuboid is						
	a) $2h(l+b)$	b) $l \times b \times h$	c) $4a^2$				
8.	S. Common factor of $5xyz$ and $10x^2y^2z^2$ is						
	a) 5xyz	b) xyz	c) $5x^2y^2z^2$				
9.	Solution of $x + 2 = 6$ is						
	a) 8	b) 4	c) -4				
10	. How many diagonals does a regula	r hexagon have?					
	a) 2	b) 9	c) 6				
11. Find the measure of each exterior angle of a regular polygon with 9 sides.							
12	. Find y.						
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13. Multiply $\underline{6}$ by the reciprocal of $\underline{-7}$. 26

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1 - VIII Math

- 14. Divide 28x⁴ by 56x.
- 15. The diagonals of a rhombus are 7.5 cm and 12 cm. Find its area.
- 16. Add p(p q), q(q r) and r(r p).
- 17. An item marked at ₹ 840 is sold for ₹ 714. What is the discount and discount %?
- 18. What is a regular polygon?
- 19. Find the side of a cube which has a surface area of 600 sq.m?
- 20. If each edge of a cube is doubled, how many times will its volume increase?

SECTION - B

- 21. Plot the points on a graph sheet A(0, 3), B(1, 4), C(-2, 5), D(6, -2).
- 22. Find the height of a cuboid whose volume is 275 cm^3 and base area is 25 cm^2 .
- 23. Represent (-11)/5 on number line.
- 24. Factorise $a^2 + 6a + 9$.
- 25. Subtract 3pq(p-q) from 2pq(p+q).
- 26. Construct a square READ with RE = 5.1 cm.

SECTION - C

- 27. A milk tank is in the form of a cylinder whose radius is 1.5 m and length is 7 m. Find the quantity of milk in litres that can be stored in the tank.
- 28. Using suitable identity, solve

a) (2y+5)(2y+5)b) $51^2 - 49^2$

- 29. Construct a quadrilateral ABCD in which AB = 6 cm, BC = 5 cm, AD = 4 cm, CD = 7 cm, BD = 6 cm.
- 30. The age of Rahul and Hari are in the ratio 5:7. Four years later, the sum of their ages will be 56 years. What are their present ages?
- 31. In the following parallelogram find the values of x, y and z.



- 32. Factorise 10ab + 4a + 5b + 2.
- 33. A man got a 10% increase in his salary. If his new salary is ₹ 1,54,000, find his original salary.
- 34. Write three rational numbers between 1/5 and 2/3.

SECTION - D

- 35. Construct a quadrilateral PLAN in which PL = 4 cm, LA = 6.5 cm, $\angle P = 90^{\circ}$, $\angle N = 85^{\circ}$, $\angle A = 110^{\circ}$.
- 36. The shape of the top surface of a table is a trapezium. Find the area of the table whose parallel sides are 1 meter, and 1.2 meter. The perpendicular distance between them is 80 centimeters.
- 37. Factorise and divide them as directed.

a) $5pq(p^2 - q^2) \div 2p(p + q)$

b) $(y^2 + 7y + 10) \div (y + 5)$

38. Draw a graph for the following.

Side of square (in cm)	2	3	3.5	5	6
Perimeter in (in cm)	8	12	14	20	24

Is it a linear graph?

- 39. What amount is to be repaid on a loan of ₹ 1,200 for 1.5 years at 10% per annum compounded half yearly?
- 40. Solve.

a)
$$\frac{z}{2+15} = \frac{4}{9}$$

b) $3(t-3) = 5(2t+1)$