SUMMATIVE ASSISEMENT – 1, JANUARY - 2022

MATHEMATICS PAPER – 1

(Modal Paper – 1)

Class: 8th **Max. Marks: 80 (PART A & B)** **Time: 2hr 45 min**

PART – A

Instructions to students:

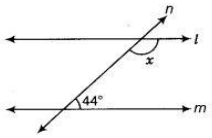
1. **The question paper comprises of three sections I, II,III.**
2. **There is an internal choice to the questions in Section – 111**
3. **Write all questions visible and legibly.**
4. **15 Minutes are given for reading the question paper and 2hr 30 min given for writing answers.**

Section – 1

Note: 1. Answer all the questions

2. Each question carries 2 mark. **4 × 2 = 8 M**

1. "All rational numbers have reciprocals". Is it true? Justify your answer.
2. Find 'x' in the adjacent figure?



3. Express $(27)^{-4}$ as a power with base 3.
4. If the compound ratio of 7:5 and 8:x is 84:60. Find 'x'.

Section – II

Note: 1. Answer all the questions.

2. Each question carries 4 marks. **5 × 4 = 20 M**

5. Express $o.7\overline{29}$ in p/q form.
6. Mary is twice older than her sister. In 5 years time, she will be 2 years older than her sister. Find how old are they both now?
7. Evaluate $\left\{\left(\frac{1}{3}\right)^{-1} - \left(\frac{1}{4}\right)^{-1}\right\}^{-1}$.
8. The printed price of a book is Rs. 150. And discount is 15%. Find the actual amount to be paid?
9. Nikki has made a sweet chikki. She wanted it to be rectangular. In how many different ways can she verify that it is a rectangular?

Section – III

Note: 1. Answer all the questions.

2. Each questions carries 8 marks.

3. There is internal choice for each question. **4 × 8 = 32 M**

10. Give reasons or examples to make the following statements true?

    A) Commutative property is not hold good in subtraction of rational numbers.

    B) Associative property holds good in multiplication of rational numbers.

    OR

    Yadaiah for his family needs borrowed Rs. 5120 at $12\frac{1}{2}\%$ per annum compounded annually. How much amount he has to pay to clear the debt at the end of two year nine months? Also find total how much interest he has paid?

11. A man had to walk a certain distance. He covered two thirds of it at 4kmph and the remaining at 5kmph. If the total time taken is 42 minutes, find the total distance?

    OR

    A motorboat goes down stream in a river and covers the distance between two coastal towns in five hours. It covers this distance upstream in six hours. If the speed of the stream is 2 kmph, find the speed of the boat in still water?

12. Rakesh solved some problems of exponents in the following way. Do you agree with the solutions? If not why? Justify your answer?

    A) $x^{-3} \times x^{-2} = x^{-6}$ C) $\frac{x^3}{x^2} = x^4$

    B) $x^{-2} = \sqrt{x}$ D) $3x^{-1} = \frac{1}{3x}$

    OR

    Malik sells two tables for RS. 3000. He gains 20% on one table and on the other he loses 20%. Find his gain or loss percent on the whole transaction?

13. Construct a trapezium ABCD in which AB || CD, AB = 8 cm, BC = 6 cm, CD = 4 cm, $\angle B = 60^0$.

    OR

    Draw a rhombus ABCD in which diagonals AC = 4.5 cm and BD = 6 cm.

Time: 30 Mins. **PART – B** **Marks:20**

Instructions:

1. Answer All the questions. 20 × 1 = 20 M
2. Each question has 4 options. Write the capital letter indicating the answer in the given brackets.
3. Marks are not awarded for over writing answers.
4. Each question carries 1 mark.

14. The interest to be paid after 3 years on the principal Rs. 2500 at 12% rate on interest is [ ]

    A) Rs. 900 B) Rs. 920 C) Rs. 875 D) Rs. 850

15. The difference between period and periodicity of $0.\overline{39}$ is _____ [ ]

    A) 37 B) 39 C) 41 D) 36

16. If we decrease 7 from four times of a number, the result is equal to 21. The equation representing this statement is _____ [ ]

    A) 4x + 7 = 21 B) 4x – 7 = 21 C) 7 – 4x = 21 D) 4x – 21 = 7

17. Choose the correct answer following. [ ]

    Statement P: In a rectangle, diagonals bisect the vertical angle.

    Statement Q: In a parallelogram, diagonals bisect the vertical angle.

    A) P true, Q false B) P false, Q true C) Both P, Q are true D) Both P, Q are false

18. If $5^{n+1} = 7^{n+1}$ then 'n' = _____ [ ]

    A) 2 B) 1 C) 0 D) – 1

19. The value of $8x^2 - 3y^3$ when x = 3 and y = 2 is _____ [ ]

    A) 5 B) 24 C) 48 D) 3

20. Which of the following is multiplicative inverse of $\left(\frac{3}{5}\right)^{-2}$ is _____ [ ]

    A) $\frac{9}{25}$ B) $\frac{25}{9}$ C) $\frac{3}{5}$ D) $\frac{5}{3}$

21. In a quadrilateral, the diagonals bisects and equal then it is _____ [ ]

    A) Rectangle B) Parallelogram C) Rhombus D) Trapezium

22. $(-5)^{-3} \times (5)^{-4}$ = _____ [ ]

    A) $(-5)^7$ B) $(-5)^{-7}$ C) $\frac{1}{5^7}$ D) $\frac{1}{(-5)^{-7}}$

23. Match the following. [ ]

    A. Solution of 2x – 3 = 5 ( ) i) 0

    B. $x^0 - (-1)^{2022}$ ( ) ii) 2

    C. $2^x = 1$, then x = ( ) iii) 4

    A) A – i, B – ii, C – iii B) A – iii, B – i, C – ii C) A – iii, B – ii, C – ii D) A – iii, B – i, C – i

24. Which of the following is a simple equation? [ ]

A) x + 3 = 0 B) x + y = 3 C) Both A & B D) None of these

25. the compound ratio of 2:3 and inverse of 3:4 in lowest terms is _____ [ ]

A) 1:2 B) 5 : 7 C) 4 : 3 D) 8 : 9

26. If $\sqrt{2}$ = 1.414, then $\sqrt{8}$ = _____ [ ]

A) 2.828 B) 1.828 C) 11.312 D) 12. 312

27. In a parallelogram ABCD, $\angle C = 55^0$, then $\angle B$ = _____ [ ]

A) 45^0 B) 35^0 C) 135^0 D) 125^0

28. The marked price of a cycle is Rs. 3600 and selling price is Rs. 3312, then discount [ ]

A) 8% B) 8.69% C) 9% D) 10%

29. Assertion: x + 2 = -5 is a linear equation in one variable.

Reason: The first degree equation is called linear equation. [ ]

A) Assertion and reason are true and reason is the correct explanation of assertion.

B) Assertion and reason are true but reason is not the correct explanation of assertion.

C) Assertion is true but reason is false.

D) Assertion is false but reason is true.

30. What number should – 33 be divided by to get 11? [ ]

A) 3 B) – 3 C) $\frac{1}{3}$ D) $-\frac{1}{3}$

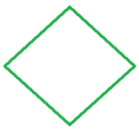
31. If 3x + 1 = 10, then x = _____ [ ]

A) – 3 B) 3 C) 9 D) – 9

32. Given m < n, then $\frac{a^m}{a^n}$ = _____ [ ]

A) a^{m-n} B) $\frac{1}{a^{m-n}}$ C) $\frac{1}{a^{n-m}}$ D) 1

33. Of the given, which is different? [ ]

A)  B)  C)  D)