SUMMATIVE ASSISEMENT – 1, JANUARY - 2022

MATHEMATICS PAPER – 1

(Modal Paper – 3)

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. "Product of a rational number and its reciprocal is always 1". Is it true? Justify your answer.
2. Expand 453.67 using exponents?
3. Four times of a number reduced by 5 equal to 19. Find the number?
4. "Very rectangle is a parallelogram". Explain?

Section – II

Note: 1. Answer all the questions.

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

5. A student attempted to draw a quadrilateral ABCD, given that AB = 3 cm, BC = 4 cm, CD = 4.5 cm, AD =2 cm and BD =6 cm. But he was not able to draw it. Why? Explain with a rough diagram.
6. Neelima went to shop to buy a dress. Marked price of the dress is Rs.1000. shop owner gave a discount of 20 % and then 5 %. Find the single discount equivalent to these two successive discounts.
7. In a pack, there are 5 books each of thickness 20mm and 5 paper sheets each of thickness 0.016 mm. What is the total thickness of the pack?
8. Express $4.\overline{7}$ in p/q form and find the value of $\frac{p-q}{p+q}$.
9. Solve 5(x + 2) – 2(3 – 4x) = 3(x + 5) – 4(4 – x).

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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. Is subtraction associative in rational numbers? Explain with an example.

OR

I borrowed Rs.12,000 from Prasad at 6% per annum simple interest for 2 years. Had I borrowed this sum at 6% per annum compounded annually, what extra amount would I have to pay?

11. The numerator of a fraction is 6 less than the denominator. If 3 is added to the numerator, the fraction is equal to $\frac{2}{3}$ find the original fraction.

OR

Venkanna purchased 50 dozen bananas for Rs.1250. He incurred transportation charges of Rs.250. He could not sell five dozen bananas as they were spoiled. He sold the remaining bananas at Rs.35 for each dozen. Will he get a profit or a loss? Find profit or loss percentage.

12. By what number should $(-15)^{-1}$ be divided so that the quotient may be equal to $(-5)^{-1}$?

OR

Lakshmi is 24 years older than her daughter Priya. 6 years ago Lakshmi's age was thrice that of Priya. If Priya's present age is 'x' then,

A) Find the present age of Lakshmi in terms of 'x'?

B) Find the ages of Priya and Lakshmi 6 years ago in terms of 'x'?

C) Find the present ages of Priya and Lakshmi (in years)?

13. Construct a rectangle FLAT with FL = 5 cm and LA = 3 cm.

OR

Construct a parallelogram PQRS with PQ = 4.5 cm, QR = 3 cm and $\angle PQR = 60^0$.

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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. If C.P of 10 articles is equal of S.P of 9 articles, then there is _____ [ ]

    A) $11\frac{1}{9}$ % gain B) $11\frac{1}{9}$ % loss C) 10 % gain D) 10 % loss

15. If $\frac{1}{x} - \frac{1}{y} = \frac{1}{z}$ then 'z' = _____ [ ]

    A) Y – x B) x – y C) $\frac{y-x}{xy}$ D) $\frac{xy}{y-x}$

16. The degree of a linear equation is _____ [ ]

    A) O B) 1 C) 2 D) Not define

17. Choose the correct answer following. [ ]

    Statement P: If m = n then $\frac{a^m}{a^n} = \frac{1}{a^{n-m}}$

    Statement Q: For any value of 'a' if $a^m = a^n$ then m = n.

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

18. If $m = a^x$ and $n = a^y$, then $m^y \times n^x$ = _____ [ ]

    A) a^{x-y} B) a^{xy} C) $\frac{1}{a^{xy}}$ D) a^{2xy}

19. Given $3^x = 45$ then 3^{x-2} = _____ [ ]

    A) 43 B) 3 C) 5 D) Not possible

20. After spending Ravi had Rs.600, then the amount of money Ravi had _____ [ ]

    A) RS.400 B) Rs. 1000 C) Rs.2000 D) Rs.2400

21. The number of independent measures are needed for construction of rectangle [ ]

    A) 1 B) 2 C) 3 D) 4

22. $(2^0 + 3^0) \times 4^0$ = _____ [ ]

    A) $(2^0)^2$ B) $(4)^{\frac{1}{2}}$ C) $(27)^{\frac{1}{3}}$ D) Both A & B

23. Match the following. [ ]

    A. Additive inverse of $\frac{a}{b}$ ( ) i) $\frac{b}{a}$

    B. Multiplicative inverse of $\frac{a}{b}$ ( ) ii) $-\frac{a}{b}$

    C. Multiplicative identity of $\frac{a}{b}$ ( ) iii) 1

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

24. The condition for ax + b = 0 to be a linear equation in one variable is [ ]

A) a = 0 B) b = 0 C) a ≠ 0 D) b ≠ 0

25. x is 75 % of y. Then the percentage of y to x is _____ [ ]

A) 25 % B) $133\frac{1}{3}$ % C) 125 % D) $33\frac{1}{3}$ %

26. A rational number which is not an integer is _____ [ ]

A) 0 B) 1 C) – 1 D) none of these

27. In a parallelogram ABCD, which of the following is true? [ ]

A) AB = BC B) BC = AD C) AC = BD D) None of these

28. The number having same multiplicative inverse is _____ [ ]

A) 0 B) 1 C) – 1 D) Both B & C

29. **Assertion**: The set of Natural numbers do not have additive identity.

Reason: '0' is additive identity number. [ ]

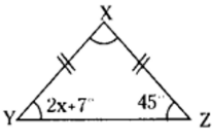
A) Assertion and reason are true and reason is the correct explanation of assertion.

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

C) Assertion is true but reason is false.

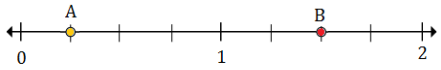
D) Assertion is false but reason is true.

30. From the adjacent figure 'x' = _____? [ ]



A) 19 B) 26 C) 38 D) 45

31. In the number line 'B' represents _____ [ ]



A) $\frac{1}{3}$ B) $\frac{1}{4}$ C) $\frac{2}{3}$ D) $\frac{3}{2}$

32. ABCD is a parallelogram, $\angle A + \angle D$ = _____ [ ]

A) 90^0 B) 180^0 C) 360^0 D) 0^0

33. $(0.0001)^{\frac{3}{4}}$ = _____ [ ]

A) 0.1 B) 0.001 C) 0.0001 D) 0.01s

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