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Code No : BEM8203

YEARLY ASSESSMENT

CLASS – VIII

MATHEMATICS

Time allowed: 2½ hour

Maximum Marks: 80

General Instructions:

The question paper is divided into **five** sections

- (i) SECTION A contains question number 1 to 10. Each carries 1 mark.
Answer **all** the questions.
- (ii) SECTION B contains question number 11 to 17. Each carries 2 marks. Answer **any 5** questions.
- (iii) SECTION C contains question number 18 to 27. Each carries 3 marks. Answer **any 8** questions.
- (iv) SECTION D contains question number 28 to 34. Each carries 4 marks. Answer **any 6** questions.
- (v) SECTION E contains question number 35 which carries 6 marks. Answer **any one** (a or b).
- (vi) SECTION F contains question number 36 which carries 6 marks. Answer **any one** (a or b).

SECTION A

1. The reciprocal of -21 is_____.
 - (a) 21
 - (b) 1/21
 - (c) -21
 - (d) -1/21
2. In the given class interval 20-30, 20 represents _____.
 - (a) lower class limit
 - (b) upper class limit
 - (c) width
 - (d) range

3. The unit digit of the square of 21 is_____.
- (a) 1 (b) 0
(c) 5 (d) 8
4. If the square of a number ends with 5, its cube ends with_____.
- (a) 0 (b) 5
(c) 6 (d) 9
5. Out of 20 fruits, there are 5 apples. Then, out of 100 fruits, how many are apples?
- (a) 10 (b) 15
(c) 20 (d) 25
6. The square root of 144 is _____.
- (a) 12 (b) 18
(c) 14 (d) 20
7. Expression that contains only one term is called _____
- (a) Monomial (b) Binomial
(c) Trinomial (d) Polynomial
8. 1 litre = _____ cm^3 .
- (a) 10 (b) 100
(c) 1000 (d) 10000
9. Express 1.01×10^{-3} in usual form
- (a) 0.0101 (b) 1.01
(c) 0.00101 (d) 0.101
10. Find the value of X and Y when multiplied.
- $$\begin{array}{r} Y \ X \\ (x) \ \underline{Y \ 3} \\ \underline{5 \ 7 \ X} \end{array}$$
- (a) X=1, Y=3 (b) X=3, Y=5
(c) X=5, Y=2 (d) X=5, Y=7

SECTION B

11. Verify that $-(-x) = x$, for $x = \frac{9}{13}$.
12. Express 81 as the sum of 9 odd numbers.
13. Find the cube root of 729 through estimation
14. Find the volume of rectangular box whose length is $3xy$, breadth and height are $4yz$ and $5xz$ respectively.
15. Find the volume of a cube whose side is 18 cm.
16. Express the number 0.00000000708 in standard form.
17. Solve and find the value of A and B

$$\begin{array}{r} B \ 9 \\ + \ 4 \ A \\ \hline 6 \ 5 \\ \hline \end{array}$$

SECTION C

18. Represent $-\frac{7}{17}$, $-\frac{9}{17}$, $-\frac{13}{17}$ on the number line.
19. Solve the equation $9x + 15 = 4x - 5$.
20. Write a Pythagorean triplet whose largest member is 17.
21. Find the square root of 9604 by Division method.
22. Find the cube root of 3375 by prime factorisation method.
23. Monthly income of Kamala is Rs.8000. 75% of the income was spent by her. Find the amount left after spending.
24. Simplify: $2x(2+4x)$ and find the value if $x = \frac{3}{2}$
25. Find the product $(5a + 4b)(2a + 3b)$.
26. Find out the diagonal of a rhombus whose area is 336 cm^2 and one of its diagonal is 24 cm.
27. 58 men can do a piece of work in 42 days how many men will do it in 14 days?

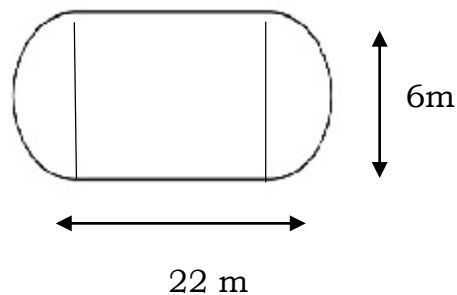
SECTION D

28. Find ten rational numbers between $-\frac{3}{7}$ and $\frac{3}{2}$.
29. Kumar is three years older than Rani. Six years ago, Kumar's age was four times Rani's age. Find the present age of Kumar and Rani.
30. The following data relates to the cost of construction of a house in Mumbai

Items	Cement	Steel	Bricks	Timber	Labour	Miscellaneous
Expenditure	30%	10%	10%	15%	25%	10%

Draw a pie chart to represent the above data

31. Find the smallest whole number by which 2028 should be multiplied so as to get a perfect square number. Also find the square root of the number so obtained.
32. Find the smallest number by which 135 must be divided to obtain a perfect cube.
33. The shape of a garden is rectangular in the middle and semicircular at the ends as shown. Find the area of this Garden.



(Hint: Length of the Rectangle = $22 - [3+3]$ m)

34. If the thickness of a pile of 12 cardboards is 35mm. Find the thickness of a pile of 294 cardboards.

SECTION E

35. (a) Construct a square DRAW with DR=5.7 cm.

(OR)

(b) Construct a quadrilateral ABCD with AB = 5 cm, BC = 4.5 cm,
CD = 4 cm, AD = 5.5 cm, AC = 6 cm.

SECTION F

36. (a) Plot the points on a graph sheet

P (1,3), Q (2,3), R (3,3), S (4,3)

(OR)

(b) Construct a histogram for the frequency distribution
of heights of 50 students of a class.

Class interval	140-145	145-150	150-155	155-160	160-165
Frequency	8	12	15	10	5
