

Roll No.

CODE : S8MA1

KENDRIYA VIDYALAYA SANGATHAN, PATNA REGION

SESSION ENDING EXAMINATION, 2017-18

CLASS - VIII

MATHEMATICS

Sl. No. 2550

TIME - 2 : 30 HOURS]

[MAX. MARKS - 80

General Instructions :

- (i) All questions are compulsory.
- (ii) The question paper consists of 32 questions divided into four sections : A, B, C and D.
Section A contains 8 questions of 1 mark each.
Section B contains 7 questions of 2 marks each.
Section C contains 10 questions of 3 marks each.
Section D contains 7 questions of 4 marks each.
- (iv) Use of calculator is prohibited.

SECTION - A (1×8=8)

1. Find the ratio of 5 m to 10 km.
2. Solve the equation $7x - 9 = 16$
3. How many diagonals does a triangle have ?
4. What is the sum of exterior angles of a polygon ?
5. Identify the terms, their coefficients for the following expression :
 $0.3a - 0.6ab + 0.5b$
6. Can a polyhedron have 3 triangles for its faces ?

[Turn Over

7. Simplify :

$$P^3 \times P^{-10}$$

8. Find the common factor of $2x$, $3x^2$, 4 .

SECTION - B (2×7=14)

9. Find the square root of 4096 by the prime Factorisation method.

10. If you subtract $\frac{1}{2}$ from a number and multiply the result by $\frac{1}{2}$, you get $\frac{1}{8}$, what is the number ?

11. Find the measure of each exterior angle of a regular polygon of 9 sides.

12. Find the product :

$$(p^2 - q^2)(2p + q)$$

13. Find the values of the letters in the following :

$$\begin{array}{r} 3 \ A \\ + 2 \ 5 \\ \hline B \ 2 \end{array}$$

14. Find and correct the errors in the following mathematical statement :

$$4(x - 5) = 4x - 5$$

15. A machine in a soft drink Factory fills 840 bottles in 6 hours. How many bottles will it fill in five hours ?

SECTION - C (3×10=30)

16. Find the square root of 4489 by Division method.

17. The ages of Hari and Harry are in the ratio 5 : 7. Five years from now the ratio of their ages will be 3:4. Find their present ages.

18. Using $a^2 - b^2 = (a + b)(a - b)$, find $(1.02)^2 - (0.98)^2$

19. Using Euler's formula find the unknown

Faces	Vertices	Edges
5	?	9

20. A suitcase of measures 80 cm × 48 cm × 24 cm is to be covered with a tarpaulin cloth. How many meters of tarpaulin of width 96 cm is required to cover 100 such suitcases ?

21. Simplify :

$$\frac{25 \times t^{-4}}{5^{-3} \times 10 \times t^{-8}} \quad (t \neq 0)$$

22. A school has 8 periods a day each of 45 minutes duration. How long would each period be, if the school has 9 periods a day, assuming the number of school hours to be the same ?

23. Divide the given polynomial by the given polynomial.

$$8(x^3y^2z^2 + x^2y^3z^2 + x^2y^2z^3) \div 4x^2y^2z^2$$

24. Find the area of a rhombus whose side is 6 cm and whose altitude is 4 cm. If one of its diagonals is 8 cm long, find the length of the other diagonal.
25. A flooring tile has the shape of a parallelogram whose base is 24 cm. and the corresponding height is 10 cm . How many such tiles are required to cover a floor of area 1080 m² ?

SECTION - D (4×7=28)

26. There are 500 children in the school. For a PT drill, they have to stand in such a manner that the number of rows is equal to the number of columns. How many children would be left out in this arrangement ?
27. Kamala borrowed Rs. 26,400 from a bank to buy a scooter at a rate of 15% p.a. compounded yearly. What amount will she pay at the end of 2 years and 4 months to clear the loan ?

[Turn Over

28. The floor of the building consists of 3000 tiles which are rhombus shaped and each of its diagonals are 45 cm and 30 cm in length. Find the total cost of polishing the floor, if the cost per m^2 is Rs 4.
29. In a stack there are 5 books each of thickness 20 mm and 5 paper sheets each of thickness 0.016 mm. What is the total thickness of the stack ?
30. Find and correct the errors in the following mathematical statements :
- (i) $(3x + 2)^2 = 3x^2 + 6x + 4$
- (ii) $(y - 3)^2 = y^2 - 9$
31. Draw a graph for the following :

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

Is it a linear graph ?

32. $31z5$ is a multiple of 3, where z is a digit, what might be the values of z ?

