SUMMATIVE ASSESSMENT – SECOND TERM

MATHEMATICS

Max. Marks: 100

Std - VIII

Time: 2.30 Hrs

I.   Choose the correct answer: **5 x 1 = 5**

1.   15% of 80 is _____.
     a) 60   b) 0.6   c) 12   d) 120

2.   The decimal form of 3% is _____.
     a) 0.3   b) 0.30   c) 0.03   d) 0.003

3. $3x - 4 = 14$ The value of x is _____.
     a) 3   b) 4   c) 5   d) 6

4.   Perimeter of the parallelogram with sides a and b is _____.
     a) $2(ab)$ b) $2 + a + b$ c) $2(a + b)$ d) $2ab$

5.   _____ is the study of techniques used for encryption and decryption of data and store in a secure form.
     a) Ciphering   b) Encrypt   c) Cryptography   d) Calligraphy

II.   Match the following: **5 x 1 = 5**

6.   Pigpen Cipher   – $c^2 = a^2 + b^2$

7.   Pythagoras theorem   –   geometric symbols

8.   70% of 1800   – $\dfrac{Pnr}{100}$

9.   Simple Interest   –   Compound Interest

10. $A = P(1 + \dfrac{r}{100})^n$ –   1260

III.   Do as Directed: **10 x 3 = 30**

11. 24% of the students of a class were absent on a rainy day. If the number of students who were absent was 6, what is the strength of the class.

12. A carpenter made a cupboard for ₹ 5000. He spent ₹ 1200 on polishing it. He now wants to sell it at a profit of 10%. What should his selling price be?

13. Find two consecutive odd numbers, such that their sum is 148.

14. Solve: $7x - 12 = 16$. Find the value of x.
            $6z - 5 = 13$. Find the value of z.

15. What is Pythagoras theorem?

16. Verify whether (7, 24, 25) is a Pythagorean triplet. Prove it.

17. Write the formula for the following with their units.
    Area of trapezium.
    Perimeter of a trapezium.

18. Write the Pascal's triangle upto Row 10.

19. Write your name and encrypt using the ATBASH cipher method. The shift key is 4.

20. Encrypt the plain text to cipher text using Polybius square method. "Mathematics is the queen of science"

IV. Answer the following: 8 x 5 = 40

21. Calculate the compound Interest.
    a) ₹ 300 for 3 years at 10% per annum.
    b) ₹ 100000 for 1 year at 8% per annum.

22. A car was purchased at puducherry for ₹ 4,50,000. The cost of transporting it to Chennai was ₹ 5000 and it needed touching up for ₹ 2500. What should be the selling cost to earn a profit of 4%?

23. The cost of two text books and three notebooks is ₹ 850. If the text book costs ₹ 40 more than the notebook, Find the cost of each textbook and the notebook.

24. The area of a rectangular plot is 300 sq m, and the length of the plot is 20m. Find the breadth and the diagonal of the rectangular plot.

25. Construct a golden spiral using ruler and compass.

26. Create your own cipher text. Encrypt and decrypt any sentence of your own.

27. The rule of Fibonacci sequence is $F(n) = F(n-2) + F(n-1)$. Find the 11th to 20th Fibonacci numbers.

28. Three numbers are in the ratio 1:2:3. The sum of the numbers is 60. Find the smallest number.

V. Geometry.   10 x 1 = 10

29. Construct a parallelogram ABCD, given AB = 7cm, AC = 10cm and ∠B = 120°. Find the Measurements of all the missing sides, Angles, and diagonals. Find the area.

VI. Graph.   1 x 10 = 10

30. Write the ordered pairs for the x and y values given in the table. Plot the points and join them.

x	−3	−2	−1	0	1	2	3
y	−10	−8	−6	−4	−2	0	2