O. P. JINDAL SCHOOL, SAVITRI NAGAR

Half Yearly Examination (2018 – 2019)

Class: VIII   **MM: 80**

Subject: Mathematics   **Time: 3 Hrs.**

Name: _____   Class / Section: _____   Roll No.:_____

(Fifteen Minutes Extra will be given for reading the Question Paper.)

General Instructions: *All questions are compulsory.*

1. Questions 1 to 6 are of 1 mark.
2. Questions 7 to 12 are of 2 marks.
3. Questions 13 to 22 are of 3 marks.
4. Questions 23 to 30 are of 4 marks.

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1. Write additive inverse of $\frac{-4}{3}$.

2. Find the value of $(2)^{-5}$.

3. What will be the unit digit in the square of 89 ?

4. Find the cube of -9.

5. Multiply the terms: $-3a^2$, $4a^3$, $-5ab$.

6. Write in percentage: 0.7

7. If 7% of a number is 49, then find the number.

8. Find x if $2x-15=49$.

9. Find $\sqrt[3]{1000}$ x $\sqrt[3]{343}$.

10. The volume of a cubical box is 512 cubic cm. Find the length of its sides.

11. Simplify : $(-3)^2$ x $(-2)^2$.

12. Represent $\frac{-7}{5}$ on a number line.

13. Find five rational numbers between $\frac{1}{4}$ and $\frac{1}{3}$.

14. Simplify : $[(\frac{-2}{3})^3 + \frac{4}{9}] \div (\frac{3}{5})^{-3}$.

15. Find square of 79 using column method.

16. What must be subtracted from 16161 to get a perfect square? Also find the square root of this perfect square.

17. Factorize:
    a) $x^2 + 10x + 21$
    b) $9x^2 - 12xy + 4y^2$

18. Ram thought of a number, doubled it and subtracted 10 from it. If the result was 40, find the number.

19. Evaluate the following using the special identities:
    a) 103 x 103
    b) 98 x 102

20. Marked price of a book is Rs 500. What would be its selling price, if seller gives 20% discount on it.

21. The difference between increasing a number by 10% and decreasing it by 8% is 9. Find the number.

22. Ratan takes 5 days to complete a certain job and Shankar takes 8 days to do the same job. If both of them work together, how long will they take to complete the work?

23. What should be added to $(\frac{3}{6} + \frac{1}{2} - \frac{1}{4})$ to get 1?

24. Find m so that:
    a) $(-3)^{m+1}$ x $(-3)^5 = (-3)^7$
    b) $(\frac{3}{4})^{-8}$ x $(\frac{4}{3})^{-12} = (\frac{3}{4})^m$

25. Find the greatest perfect square of six-digit number.
26. (a) Find the product using identity: (3x-3)(3x+3) .
    (b) Factorize: $x^4 - y^4$.
27. The length of a rectangle is twice the breadth. If its perimeter is 120 cm. Find its area.
28. A man sold two scooters for Rs 18,000 each. On one, he gained 20% and on the other, he lost 20%. Find his total loss or gain.
29. Find the compound interest on Rs 90,000 for 3 years at the rate of 10% per annum compounded annually.
30. The strength of a school is 3500. If 45% of the students are boys, then how many girls are in the school? If each student has donated Rs 100 for the victims of Kerala flood, find the total amount collected by the school. What moral value we are getting from this act?

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