Question Paper SA - I, 2016-2017

CBSE Class VIII

Mathematics

SHIKSHA BHARATI SCHOOL

General Instruction:

- Section A carry 1 mark each question.
- Section B carry 2 marks each question.
- Section C carry 3 marks each question.
- Section D carry 4 marks each question.

SECTION: A

1. The rational number not equivalent to $\frac{-16}{28}$ is

(a) $\frac{-48}{84}$

(b) $\frac{-12}{21}$

(C) $\frac{-4}{7}$

(d) $\frac{-64}{116}$

2. The value of $\left(\frac{2}{5}\right)^{-4}$ is

(a) $\frac{16}{625}$

(b) $\frac{-625}{16}$

(C) $\frac{625}{16}$

(d) $\frac{-16}{625}$

3. A perfect square cannot have the digit.

(a) 9 at once place

(b) 1 at once place

(c) 8 at once place

(d) 4 at once place

4. The value of $\sqrt{1228.5025}$ is

(a) 34.25

(b) 35.05

(c) 35.75

(d) 34.75

5. The cube root of 4.096 is

(a) 34.25

(b) 35.05

(c) 35.75

(d) 34.75

6. Think of a number, adds, then multiply by 6. The answer is 180. What is the number?

(a) 35

(b) 25

(c) 45

(d) 50

7. Which of the following number is divisible by both 3 and 2?

(a) 1023

(b) 4029

(c) 1032

(d) 2512

8. The product of $7y^5$ and $10y^{20}$ is

(a) $70y^{25}$

(b) $35y^{25}$

(c) - $70y^{25}$

(d) - $35y^{25}$

9. The value of $(537)^2 - (536)^2$ is

(a) 12436

(b) 538

(c) 1073

(d) 2358

10. If $x-\frac{1}{2}=\frac{1}{2}$, then the value of x is

(a) 4

(b) $\frac{1}{4}$

(c) - 2

(d) 1

SECTION: B

11. If three angles of a quadrilateral are 20^o, 90^o and 90^o. Find the fourth angle of the quadrilateral.

12. Solve $\frac{x+2}{3}-\frac{x-3}{4}=5\frac{x-1}{2}$

13. The product of two rational numbers is $\frac{5}{18}$. If one them is $\frac{-3}{20}$, find the other.

Q14. Simplify

(i) $(3^2+2^2)\times\left(\frac{1}{2}\right)^3$

(ii) $(3^2-2^2)\times\left(\frac{2}{2}\right)^{-3}$

15. Find x and y (two positive numbers) such that x + y = 340 and the difference b/w x and y is 60.

16. Divide:

(i) $8x^3 - 12x^3 + 16x +$ by 2x

(ii) $5x^3 - 15x^2 + 25x$ by 5x

17. Find:

(i) $(a - 2c)^2$

(ii) $(3y - 5)^2$

18. The longer side of the parallelogram is 8.4 cm. and the shorter side is half of the longer side. Find the parallelogram.

19. Insert 6 rational numbers b/3: $\frac{7}{11}$ and $\frac{8}{11}$.

20. Using prime factorization state which of the following is/are perfect square(s)?

(i) 729

(ii) 445

SECTION: C

21. Find the square of the following no. using the column method.

(i) 25

(ii) 53

22. Find the cubes of the following no. using the column method.

(i) 27

(ii) 35

23. For what possible value of b following numbers are divisible of 3?

(i) 7b23

(ii) 83b49

24. The angles of a quadrilateral are in the ratio 1:2:3:4. What is measure of the four angles separately?

25. Find the three consecutive numbers whose sum is 183.

26. Find the square root of the following numbers by long division method.

(i) 194481

(ii) 53361

27. Complete the following tables by finding a, b, and c.

N	6n + 10
a	22
b	40
30	c

28. The sides of a triangle are given by x, 2x + 2 and 3x – 2. If its perimeter is 30 cm, then find the smallest sides of the triangle.

29. Find the value if m:

(i) $\left(\frac{2}{3}\right)^2 \times \left(\frac{2}{3}\right)^5 = \left(\frac{2}{3}\right)^m$

(ii) $\left(\frac{2}{7}\right)^{-5} \times \left(\frac{2}{7}\right)^m = \left(\frac{2}{6}\right)^6$

30. In the adjoining figure, ABCD is a 11gm. If ∠BAD = 85o and ∠CBD = 60o than calculate

(i) ∠CDB

(ii) ∠ABD

SECTION: D

31. True/False:

I. If a number is divisible by both 3 and 6, it much be divisible by 18.

II. If a number is divisible by 8, it must be divisible by 4.

III. The sum of two odd number is always divisible by 4.

IV. The number formed by writing non – zero digit six times (e. g. 555555) is always divisible

by 11.

32.

Column A	Column B
a. $a^m \times a^n$	p.a^{m-n}
b. 0.000037	q.a^{m+n}
c. $(7^5 \div 7^2) \times 3^3$	r. $3.7 \times (10)^{-5}$
d. $a^m \div a^n$, m > n	s. $(21)^3$

33. (a) What must be subtracted from 4562 to get a perfect square? Also, find the square root of this perfect square.

(b) Find the square root by factorization method 14400.

34. What is the smallest number by which 1372 must be multiplied so that the product becomes a perfect cube? Find the required perfect cube so obtained.

35. Fill in the blanks:

I. cubes of all _____ national no's are odd.

II. The sum of two rational numbers is always a _____.

III. The product of any rational number with _____ is the rational number itself.

IV. $(425)^2 - (425)^2$ = _____.