



Brilliant Public School

Seepat Road, Bahatarai, Bilaspur (C.G.)

Annual Examination – 2017-18

Class - VIII

Subject – Mathematics

Time: 2:30 Hrs.

Date: 28.02.2018

M.M. 80

Wednesday

General Instructions:

- All questions are **compulsory**
- The question paper consists of **30** questions divided into four **sections-A, B, C and D**. **Section-A** comprises of **6** questions of **1mark** each, **section-B** comprises of **6** questions of **2** marks each, **Section-C** comprises of **10** questions of **3 marks** each, **Section-D** comprises of **8** questions of **4** marks each.
- There is no overall choice in this question paper
- Use of calculator is not permitted.

Section - A

(1x6=6)

- Find the value of $(3^{-1} \times 4^{-1})^{-1} \div 6^{-1}$.
- Find the area of a regular hexagon whose side measure is 5cm.
- After spending 75% of his money Rajeev had ₹ 600. Find the amount which Rajeev had.
- Plot the following points on graph.
A (-5,-4), B (-4, 2), C(0,-5), D(2,0)
- Subtract : $-1 + a - a^4$ from $3a + 2a^2 + 3a^3 - 4a^4$.
- Factorize: $x^2 + xy + 8x + 8y$.

Section – B (2x6=12)

- (a)** What is the minimum interior angle possible for a regular polygon? Why?
(b) What is the maximum exterior angle possible for a regular polygon?
- Is 392 a perfect cube? If not, find the smallest natural number by which 392 must be multiplied so that the product is a perfect cube.
- Use suitable identity to get the product of $(3a - \frac{1}{2})(3a - \frac{1}{2})$.
- The area of a rhombus is 240 cm^2 and one of the diagonal is 16cm. Find the other diagonal.
- Find the value of m for which $5^m \div 5^{-3} = 5^5$.
- Factorize : $(i+m)^2 - 4im$

SECTION C (3x10=30)

13. Simplify: $\frac{8^{-1} \times 5^3}{2^{-4}}$

OR

$$\frac{3^{-3} \times 10^{-5}}{5^{-7} \times 6^{-5}}$$

- Simplify : $(9p^2 - p + 15) \times (p^2 - p - 1)$
- Simplify: $a(a^2 + a + 1) + 5$ and find its value for $a = -1$.
- The length of the diagonal of a square is $8\sqrt{2}$ cm. Find the length of its side and hence find the area of

the square.

17. The ages of Ram and Rahim are in the ratio 5:7. Four years from now the ratio of their ages will be 3:4.

Find their present ages.

18. Mohan wants to buy a trapezium shaped field. Its side along the river is parallel to and twice the side along the road. If the area of this field is 10500m^2 and the perpendicular distance between the two parallel sides is 100 m, find the length of the side along the river.

19. A man got a 10% increase in his salary. If his new salary is Rs. 1,54,000. Find his original salary.

20. Draw the graph for the following

Side of Square	2	3	4	5	6
Area in (cm^2)	4	9	16	25	36

Is it a linear graph?

21. A Mixture of paint is prepared by mixing 1 part of red pigments with 8 parts of base. In the following table, find the parts of base that need to be added.

Parts of red pigment	1	4	7	12	20
Parts of base	8

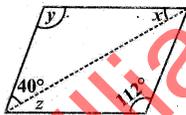
22. Find the smallest number by which 704 must be divided to obtain a perfect cube.

Section -D_ (4x8=32)

23. Simplify: $(x+y)(x+y+z) - (x-y)(x-y-z)$

24. Devi has a total of Rs. 590 as currency notes in the denominations of Rs 50, Rs. 20 and Rs. 10. The ratio of the number of Rs. 50 notes and Rs. 20 notes is 3:5. If she has a total of 25 notes, how many notes of each denomination she has?

25. Find the values of unknowns from the following parallelogram.



26. Find the cube root of 17576 by estimation method.

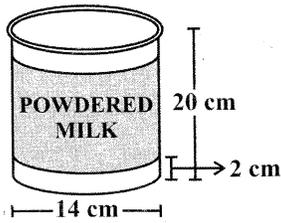
27. The population of a place increased to 54,000 in 2003 at a rate of 5% per annum

(i) find the population in 2001.

(ii) What would be its population in 2005?

OR

A company packages its milk powder in cylinder container whose base has a diameter of 14cm and height 20cm. Company places a label around the surface of the container (as shown in the figure). If the label is placed 2cm from top and bottom, what is the area of the label.

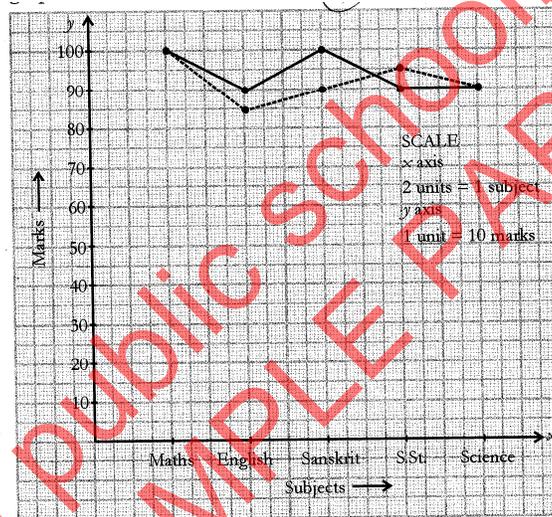


28. Simplify: $\frac{25t^{-4}}{5^{-3} \times 10t^{-8}}$ ($t \neq 0$)

29. Which of the following are in inverse proportion? Give Reasons

- (i) The number of workers on a job and the time to complete the job
- (ii) The population of a country and the area of land per person.
- (iii) Area of cultivated land and the crop harvested.
- (iv) The time taken for a fixed journey and the speed of the vehicle.

30. Siddhi is one of the best students. Her predicted marks in class VIII and her actual are shown in the graph.



The dotted line represents the predicted marks and the solid line represents the actual marks.

- (a) In subjects _____ and _____ her actual and predicted marks are equal.
- (b) In _____ she got more marks than predicted marks.
- (c) In _____ her marks were less than the predicted marks.
- (d) In _____ the difference between the actual and predicted marks is the maximum.
- (e) (0,-5) lies on _____ axis.
- (f) To draw the graph of a line, the least number of the points required is _____.
- (g) Do you think that marks are important in one's life? Give your opinion about importance of scores in life.