

I. Choose the correct answer for the following :

1x8=8

1. The simplified form of  $\frac{135}{81}$  is :  
a)  $\frac{5}{3}$                       b)  $\frac{15}{9}$                       c)  $\frac{3}{5}$                       d)  $\frac{45}{27}$
2. Example of rational number is :  
a)  $1+\sqrt{3}$                       b)  $\pi$                       c)  $2\sqrt{3}$                       d) 0
3. The degree of the polynomial of  $5x^3+4x^2+7x$  is :  
a) 1                      b) 2                      c) 3                      d) 4
4. The co-efficient of the x in the simplified form of  $(x+3)^3$  is :  
a) 1                      b) 9                      c) 18                      d) 27
5. The value of  $(64)^{1/2}$   
a) 8                      b) 16                      c) 6                      d) 12
6. Which of the following is not a polinomial :  
a)  $4x^2-3x+7$                       b)  $x^3+3x^2+1$                       c)  $y^2+\sqrt{2}$                       d)  $y+\frac{2}{\sqrt{y}}$
7. The number of straight lines passe sthrough a point :  
a) 1                      b) 2                      c) 3                      d) Infinite
8. If two lines are interest each other them vertically opposite angles are:  
a) straight angle                      b) Right angle                      c)unequal                      d) equal

II. Answer the following questions :

1x4=4

9. State the Remainder theorem?
10. Who is the father of Geometry?
11. Write the directive points of Origion?
12. Difine Postulates?

III. Answer the following questions :

2x7=14

13. Find the 6 rational numbers in between 3 and 4 ?
14. Simplify:  $(3+\sqrt{3})(3-\sqrt{3})$ .
15.  $\frac{1}{7} = 0.142857...$  then find Decimal expansion of a)  $\frac{2}{7}$                       b)  $\frac{3}{7}$  without long division?
16. Find the value of polynomial  $5x-4x^3+3$ , when  $x=2$ .

17. Find the remainder when  $x^3+3x^2+3x+1$  is divided by  $(x+1)$  by using Remainder theorem?

18. Evaluate the product of  $103 \times 107$  without using multiplication directly?

19. Express  $0.\overline{6}$  in the form of  $\frac{p}{q}$ , where  $(p, q \in \mathbb{Z}, q \neq 0)$ .

IV. Answer the following questions:

3x2=6

20. Represent  $\sqrt{3}$  on number line?

21. Construct a triangle ABC in which  $BC=7$  cm,  $\angle B=75^\circ$  and  $AB+AC=13$ cm.

V. Answer the following questions:

4x2=8

22. The angles of quadrilateral are in the ratio 3 :5 :9 :13. Find all the angles of The quadrilateral?

23. Prove that "The sum of the interior angles in the triangle is  $180^\circ$ ".

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