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| **CLASS REVISION TEST-01****MATHEMATICS** |
| **EX.NO**  |  | **AD.NO** |  | **GRADE**  | **X** |
| **DATE**  | **21/11/19** | **MARKS** | **80** | **TIME** | **3 Hrs** |

Choose the best answer:

1. The quadratic polynomial in x whose zeroes are 3 and -4 a is \_\_\_\_\_\_\_\_\_\_\_.

 a) x2-x+12 b) x2-3x-4 c) x2-3x+12 d) x2-x-12

2. What is the quotient when 2x2+3x-2 is divided by x+2?

 a) 2x+1 b) x-1 c) 2x-1 d) x+1

3. If $α$and $β$are the zeros of x2-3x+10 . Find the value of $\frac{α}{β}+ \frac{β}{α}$

 a) $\frac{-11}{10}$ b) $\frac{-29}{10} $ c) $\frac{9}{10}$ d) $\frac{11}{9}$

4. The pair of equations 2x +3y =0 4x +6y = 10 has

 a)one solutions b) two solution c) no solution d) infinitely many solution

5. The roots of the equation x2-2$√3x$ +3=0 are

 a) $√3,√3$ b) $√3√2$ c) 2$ \sqrt{3},-√3$ d)$ \sqrt{3},-3√3$

6. If a -3 = $\frac{10}{a}$ , the value of a are

 a) -5,2 b) 5,-2 c)5,2 d) 5,0

7. the $\sqrt{6+\sqrt{6+\sqrt{6+}….}}$ value of is

 a) 4 b) 3 c) -2 d)$\frac{7}{2}$

8. A man receives Rs.60 for the first week and Rs.3 more ach week than the preceeding week. How much does he earns by the 20th week?

 a)Rs. 1760 b) 1770 c) 1780 d) 1790

9.The next term of the A.P.$ ,\sqrt{8},\sqrt{18},\sqrt{32},$…….. is

 a) 5$,√2$ b)5$,√3$ c)3$,√3$ d)4$,√3$

10.The sum of first 100 multiples of 9 is

 a) 90900 b) 25250 c)45450 d)none of these

11. Degree of remainder always \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ than degree of divisions.

12. If $α$ and $β$ are zeros and the quadratic polynomial.

F(x) : x1 – $α$ $β$ is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

13. If Sin $α$ and cos $α$ are the roots of the equation ax2 +bx + c =0 then b2 = \_\_\_\_\_\_\_\_\_\_.

14. If common difference of the A.,P is $\frac{1}{2q}$ , $\frac{1-2q}{2q}$ , $\frac{1-4q}{2q}$ , ……… is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

15. If sum of n terms of an AP be 3n2 + n and its common difference 6, then its first term is \_\_\_\_\_\_\_\_\_\_\_.

Answer the following:

16. Find the quadratic polynomial whose zeroes are 2+$,√3$ and 2- $,√3.$

17. The sum of the digits of a two digit number is 12. The number obtained by interchanging the two digits exceeds the given number by 18. Find the number.

18. Find the value of k for which the quadratic equation (k+1)x2-2 (k-1)x+1=0 has real and equal roots.

19. Solve: $,√2$x2 +7x+5$,√2$ =0

20. Determine the AP whose third term is 16 and the 17th term exceeds the 5th term by 12.

21. Find all the zeroes of the polynomial x3 + 3x2-2x-6, if two of its zeroes are $√2$ and -$√2$

22. If $α$ and $β$ are the zeroes of the quadratic polynomial f(x)=4x2-5x-1, then find the value of $\frac{α}{β} \frac{β}{α}+2( \frac{1}{α}+\frac{1}{β} )+3αβ$

23. Solve the following system of 4 more than 6 times the sum of its digit . If 8 is subtracted from the number, the digits are reversed. Find the number.

24. Solve 2x2+x+4=0

25. A boy is one year older than his friend. If the sum of the square of their ages is 421, find their ages.

26. How many three digit numbers are divisible by 7?

27. If X2-3 is the factor of the polynomial 3x4 + 5x3-2x-18, find all the possible zeros of it.

28. Solve the following pair of equations for x and y:

$\frac{8}{x+y}$ - $\frac{3}{x-y}$ = - 1 ; $\frac{6}{x+y}$ - $\frac{5}{x-y}$ = 21

29. In a cyclic quadrilateral ABCD,

$∠$ A(2x+15)0, $∠$B = (4y +24)0 $∠$C = (3y +25)0 $∠$D = (x +36)0

Find all the four angles of the cyclic quadrilateral.

30. A train moving with uniform speed, for a certain distance takes 3 hours less, when its speed is increased by 10 kmph. It would have taken 5 hours more, had its speed been decreased by 10 kmph. Find the distance traveled by the train and the speed of the train.

31. Solve for X :$ \frac{1}{a+2b+2x}$ = $\frac{1}{a}$ +$\frac{1}{2b}$ + $\frac{1}{2x}$

32. Two pipes P1 and P2together can fill a tank in 8$\frac{8}{9}$ minutes. If pipe P1 takes 4 minutes less than the pipe P2 to fill the tank respectively . Find the time in which each pipe would fill the tank separately.

33. If an AP , is S6 + S8 =128 and S10 = 120 , then find the AP where Sn denotes the sum of the first n terms.

34. The sum of the squares of two natural numbers is equal to 793. The square of the smaller number is 37 more than the larger number. Find the larger number.

35. The houses in a row are numbered consecutively from 1 to 49. Show that there exists a value of x such that sum of the numbers of houses preceding the house numbered x is equal to sum of the3 numbers of houses following x. Find the value of x.

36.The sum of the 6th and the 9th terms of an AP is 80. If its 20th term is three its 5th term, then find its nth term.

37. Ramesh bought some books for Rs. 120. If he had bought 2 more books for the same amount, each book would have cost Rs.3 less. Find the number of books he bought. What values should be imbibed by the students for purchasing?

38. There are two sections A and B of class X in a school. If 4 students are sent from A to B, the number of students in each section becomes same. If 16 students in section A becomes triple the number of students in section B. Find the number of students in each section.

39. Points A and B are 100 km apart from each other, A car starts from A and another car starts from B at the same time. If they travel in the same direction then they meet after 10 hours and if they travel in opposite direction they meet after 2 hours. Find their speeds.

40. Find the others zeros of the polynomial 3X2 – 7X3+21x+18 of two of its zeros are $√3$ and - $√3$