Exam Code

Test Booklet Code

Class 10 - Polynomials - Test 4

1. Quadratic polynomial having zeros 1 and -2 is -

(a) $x^2 - x + 2$
(b) $x^2 - x - 2$
(c) $x^2 + x - 2$
(d) None of these

2. If $(x - 1)$ is a factor of $k^2x^3 - 4kx + 3$, then the value of k is

(a) 1
(b) -1
(c) 2
(d) -2

3. If α, β be the zeros of the quadratic polynomial $2x^2 + 5x + 1$, then value of $\alpha + \beta + \alpha\beta =$

(a) -2
(b) -1
(c) 1
(d) None of these

4. Quadratic polynomial having sum of it's zeros 5 and product of it's zeros -14 is-

(a) $x^2 - 5x - 14$
(b) $x^2 - 10x - 14$
(c) $x^2 - 5x + 14$
(d) None of these

5. If $x = 2$ and $x = 3$ are zeros of the quadratic polynomial $x^2 + ax + b$, the values of a and b respectively are :

(a) $5, 6$
(b) $-5, -6$
(c) $-5, 6$
(d) $5, 6$

6. On dividing $x^3 - 3x^2 + x + 2$ by polynomial $g(x)$, the quotient and remainder were $x - 2$ and $4 - 2x$ respectively then $g(x)$.

(a) $x^2 + x + 1$
(b) $x^2 + x - 1$
(c) $x^2 - x - 1$
(d) $x^2 - x + 1$

7. If α, β and γ are the zeros of the polynomial $f(x) = x^3 + px^2 - pqrx + r$, then $\frac{1}{\alpha\beta} + \frac{1}{\beta\gamma} + \frac{1}{\gamma\alpha} =$

(a) $\frac{r}{p}$
(b) $\frac{p}{r}$
(c) $-\frac{p}{r}$
(d) $-\frac{r}{p}$

8. If α, β are the zeros of the polynomial $x^2 - px + 36$ and $\alpha^2 + \beta^2 = 9$, then $p =$

(a) ± 6
(b) ± 3
(c) ± 8
(d) ± 9

9. The cubic polynomials whose zeros are $4, 3/2$ and -2 is

(a) $2x^3 + 7x^2 + 10x - 24$
(b) $2x^3 + 7x^2 - 10x - 24$
(c) $2x^3 - 7x^2 - 10x + 24$
(d) None of these

10. If the sum of zeros of the polynomial $p(x) = kx^3 - 5x^2 - 11x - 3$ is 2, then k is equal to

(a) $k = -5/2$
(b) $k = 2/5$
(c) $k = 10$
(d) $k = 5/2$

11. If the sum of the two zeros of $x^3 + px^2 + qx + r$ is zero, then $pq =$

(a) $-r$
(b) r
(c) $2r$
(d) $-2r$

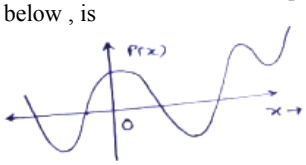
12. If α, β are the zeros of the quadratic polynomial $4x^2 - 4x + 1$, then $\alpha^3 + \beta^3$ is

(a) $1/4$
(b) $1/8$
(c) 16
(d) 32

13. If p, q are zeros of $x^2 + px + q$ then

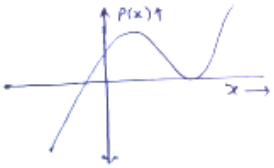
(a) $p = 1$
(b) $p = 1$ or $p = 0$
(c) $p = -2$
(d) $p = -2$ or 0

14. The number of zeroes for the polynomial whose graph is given below , is



(a) 3
(b) 4
(c) 5
(d) 6

15. Number of zeroes of the polynomial whose graph is given



(a) 1
(b) 2
(c) 3
(d) 4

16. Maximum number of zeroes, a cubic polynomial can have , is

(a) 1
(b) 2
(c) 3
(d) infinite

17. Sum of zeroes of the polynomial $x^2 - 4$ is

(a) 4
(b) -4
(c) 0
(d) none

18. When $p(x) = x^3 - 3x^2 + 5x - 3$ is divided by $x^2 - 2$, remainder is

(a) $7x - 9$
(b) $7x + 9$
(c) 3
(d) $9x - 7$

19. Which one of these is not a factor of polynomial $x^3 - 7x - 6$

(a) $x + 1$
(b) $x + 2$
(c) $x - 3$
(d) $x - 2$

20. If two zeros of a polynomial $3x^4 + 6x^3 - 2x^2 - 10x - 5$ are $\sqrt{5/3}$ and -$\sqrt{5/3}$ then to get two zeroes, polynomial must be divided by

(a) $3x^2 + 5$
(b) $5x^2 - 3$
(c) $5x^2 + 3$
(d) $3x^2 - 5$

21. If two zeroes of a polynomial $p(x)$ are $2 \pm \sqrt{3}$ then $p(x)$ must be divided by (to get other zeroes)

(a) $x^2 - 3x + 1$
(b) $x^2 - 4x - 1$
(c) $x^2 - 4x + 1$
(d) $x^2 + 4x - 1$

22. What shoud be added to polynomial $x^3 - 4x^2 + 6x + 2$ so that it is divisible by -2 ?

(a) 6
(b) -6
(c) 0
(d) 3

23. What must be substracted from the polynomial $p(x) = x^4 - 2x^2 + 3x - 6$ so that $p(x)$ is divisible by $x^2 + x + 1$

(a) $5x - 4$
(b) $4 - 6x$
(c) $4x + 5$
(d) $4x - 5$

24. Maximum number of terms a degree 5 polynomial in one variable can have is

(a) 4
(b) 5
(c) 6
(d) 7

25. If α, β are zeroes of polynomial $x^2 + x + 3$ then $\alpha^3 + \beta^3$ is equal to

(a) 2
(b) -2
(c) 3
(d) none

26. Cubic polynomial with zeroes $1, 2, -3$ is

(a) $x^3 + 7x - 6$
(b) $x^3 - 7x + 6$
(c) $x^3 - x^2 + 7x - 7$
(d) $x^3 + 6x + 6$

27. Zeroes of Quadratic polynomial $x^2 + 1$, are

(a) $1, -1$
(b) not real numbers
(c) $1, 0$
(d) none of these

28. If a degree 4 polynomial is divided by a quadratic polynomial then degree of remainder will be

(a) 2
(b) 1
(c) 1 or 0
(d) Can't say anything

29. If a polynomial $p(x) = (x - 2)(x + 3)(x + 1)$ is divided $x - 1$, then remainder will be

(a) 8
(b) -8
(c) 4
(d) -4

30. If degrees of dividend and divisor polynomials are 4 and 2 respectively, then degree of quotient will be

(a) 3
(b) 1 or 2
(c) 2 or 3