CHAPTER-2 POLYNOMIALS (10m)

(PULKIT JAIWAL)

(MCQ)

Latest pattern

Q1. Which one is linear polynomial → (a) $3x^2+5x+6$ (b) $5x^3+3x^2+2x+1$ (c) $\frac{3}{8}z+\frac{6}{5}$ (d) None of them is linear polynomial.

Q2. Which one is the correct relationship between dividend, Divisor, Quotient & Remainder → (a) Divisor = Dividend × Quotient + Remainder.
(b) Dividend = Divisor × Q + R (c) Q = Dividend × R + Divisor (d) None

Q3. for the given equation $cx^2+ax+b=0$ the sum of roots & product of roots is.
(a) Sum of roots = $\frac{-b}{a}$, product = $\frac{c}{a}$ (b) Sum = $\frac{-b}{c}$, product = b/c
(c) Sum = $\frac{-a}{c}$, product = b/c (d) None of these.

Q4. The zeros of the given polynomial $f(q)=q^2-5$ is (a) $\sqrt{5}$ (b) $-\sqrt{5}$ (c) 5 (d) Both a & b

Q5. The zeros of the polynomial $x(x^2-9)$ → (a) 2 zeros (b) 3 zeros (c) 4 zeros (d) None

Q6. Which one is not a quadratic polynomial → (a) $5x^2-2x+1$ (b) $-\frac{2}{5}x+\frac{1}{5}+\frac{3}{5}x^2$
(c) $\frac{6\sqrt{x}}{x^{1/2}}-2x^2+5x$ (d) $5x^3+6x^2+\frac{1}{x}$ (e) All of them are Quadratic.

Q7. Which one is not a polynomial. → (a) $x^2\sqrt{3}-2\sqrt{3}x+6$ (b) $\frac{5}{6}x^4+\frac{5}{7}x+1$
(c) $\frac{6\sqrt{x}}{x^{1/2}}-2x^2+5x$ (d) $\frac{x^{3/2}}{\sqrt{x}}+x^2+1$ (e) $x+\frac{1}{x}$

Q8. A quadratic polynomial whose zeros are $-\frac{1}{2}$ and $\frac{6}{7}$ is → (a) $x^2-\frac{x}{2}+\frac{6}{7}=0$
(b) $x^2+\frac{1}{2}x+\frac{6}{7}=0$ (c) $-x^2-\frac{x}{2}+\frac{6}{7}=0$ (d) None of these

Q9. If $p(t)=3t^3-2t^2+6t-5$ then find $p(-1)+p(1)=??$ (a) −16 (b) 2 (c) −14 (d) 14

Q10. The zeros of polynomial $f(x)=3-2x-x^2$ is (a) (1,3) (b) (−1,3) (c) (1,−3) (d) None

Q11. The no. of zeros of the $f(y)=\frac{x^2}{\sqrt{3}}+\frac{2}{\sqrt{5}}x+\sqrt{5}$ is (a) 1 (b) 2 (c) 3 (d) None

Q12. If sum of the zeros of $f(m)=3m^2+6-km$ is −3, then value of "m" is
(a) 9 (b) −9 (c) 0 (d) 7. (e) None of these

Q13. The zeros of polynomial $p(t)=-4t+\frac{4}{3}$ is → (a) $\frac{16}{3}$ (b) $\frac{-4}{3}$ (c) $\frac{4}{3}$ (d) $\frac{1}{3}$

Q14. The Number of zeros of polynomial $f(y)=\frac{\sqrt{2}}{2}y+\sqrt{6}$ is (a) 1 (b) 2 (c) 3.
(d) None of these

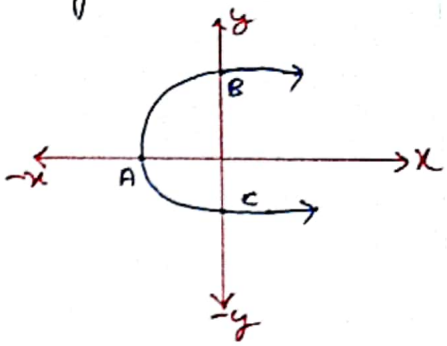
Q15. The number of zeros of polynomial $f(x) = x^2(x-2)$ are (a) 1 (b) 2 (c) 3 (d) 4

Q16. The zeros of polynomial $f(t) = t^3 - 5t^2$ are (a) (0,0,5) (b) (0,0) (c) (0,0,-5)

Q17. Sum and product of zeros of $f(y) = y + 2(-3+y^2)$ is (a) $-\frac{1}{2}$ & -3
(b) $\frac{1}{2}$ & 3 (c) $-\frac{1}{2}$ & 3 (d) $-\frac{1}{2}$ & 0

Q18. If 2 & -3 are the zeros of $f(x) = x^2 + (a+1)x + b$ then which relation is correct between a & b → (a) $b = 2a$ (b) $a = 2b$ (c) only $b = -6$ (d) None

Q19. The number of zeros of the given graph is →
(a) 1 zero (b) 2 zeros (c) 3 zeros (d) None



Q20. This graph represent which type of equation.
(a) Quadratic (b) linear (c) Cubic (d) None

Q21. If α and β are the zeros of the polynomial $f(x) = x^2 - c - p(x+1)$ then $(\alpha+1)(\beta+1) = ??$ (a) $-c$ (b) $(1+c)$ (c) $(-1-c)$ (d) $(-c+1)$

Q22. If the product of zeros is of polynomial $ky^2 - 6 - 6y$ is -4 then value of k is
(a) $-\frac{2}{3}$ (b) $-\frac{3}{2}$ (c) $\frac{6}{14}$ (d) None

Q23. The zeros of the polynomial $\sqrt{2}x^2 - 3x - 2\sqrt{2}$ are → (a) $2\sqrt{2}, \frac{-1}{\sqrt{2}}$ (b) $-2, \frac{-1}{\sqrt{2}}$
(c) $-2\sqrt{2}, \frac{-1}{\sqrt{2}}$ (d) None

Q24. Which one of the following is the zero of the polynomial $(x^4 - 7x^2 + 12)$
(a) $\sqrt{3}$ (b) $\sqrt{2}$ (c) $-\sqrt{2}$ (d) None

Q25. Which one of the following is not a zero of the polynomial $x^3 - 2x^2 - 5x + 6$.
(a) 3 (b) -2 (c) 1 (d) -1

Q26. The zeros of the polynomial $2s^2 - (1+2\sqrt{2})s + \sqrt{2}$ are (a) $\sqrt{2}, 0$ (b) $\frac{1}{2}, 2\sqrt{2}$
(c) $-\sqrt{2}, \frac{1}{\sqrt{2}}$ (d) $+\frac{1}{2}, \sqrt{2}$

Q27. Which of the following are zeros of polynomial $x^2 + 5\sqrt{3}x + 12$
(a) $-\sqrt{3}$ (b) $4\sqrt{3}$ (c) $-4\sqrt{3}$ (d) Both (a) & (c) (e) Both (a) & (b)

Q28. Which of the following are the 0's of the polynomial $3t^2 + 5\sqrt{5}t - 10$
(a) $-\frac{\sqrt{5}}{3}, 2\sqrt{5}$ (b) $-\frac{\sqrt{5}}{3}, -2\sqrt{5}$ (c) $\frac{\sqrt{5}}{3}, 2\sqrt{5}$ (d) $\frac{\sqrt{5}}{3}, -2\sqrt{5}$

029. If one of the zero of the polynomial $(kx^2 + kx + 1 - x^2)$ is -3. then value of k is (a) $\frac{-4}{3}$ (b) $\frac{3}{4}$ (c) $\frac{-3}{4}$ (d) $\frac{4}{3}$ (e) None of these

030. If α and β are the zeros of polynomial $p(t) = (t^2 - 1)$ then $(\alpha+\beta) = ??$
(a) 0 (b) 1 (c) -1 (d) None of these

031. If m kn are the zeros of polynomial $f(x) = \frac{3}{2}x^2 + \frac{1}{4}x$ then $(^{m}x_{n})$ is
(a) $\frac{-1}{6}$ (b) $\frac{1}{6}$ (c) $\frac{3}{4}$ (d) 0 (e) Can't determine.

032. The zeros of the polynomial $7a^2 - \frac{11}{3}a - \frac{2}{3}$ are
(a) $\frac{1}{7}, \frac{-2}{3}$ (b) $\frac{-1}{7}, \frac{2}{3}$ (c) $\frac{-1}{7}, \frac{-2}{3}$ (d) None of these

033. The zeros of the polynomial $f(x) = 3 - 2x - x^2$ are →
(a) $(1, -3)$ (b) $(-1, -3)$ (c) $(1, 3)$ (d) None of these

034. The zeros of the polynomial $f(x) = x(x+1)^2$ are
(a) $0, 1, -1$ (b) $0, -1, -1$ (c) $0, 1, 2$ (d) $0, -1, -2$

035. How many zeros does a polynomial $f(x) = x^4 - \frac{2}{3}x^3 + x^2 + x + 2$ have.
(a) only 1 (b) 2 (c) 3 (d) 4 (e) None of these

036. If α and β are the 0's of the polynomial $f(x) = x^2 - k(x+1) - c$
Then $(1+\alpha)(1+\beta) = ??$ (a) $(1+c)$ (b) $(1-c)$ (c) $(1 \div c)$ (d) None

037. If one zero of the polynomial $4x^2 - 8kx - 9$ is negative of other then $k = ??$
(a) $k = 1$ (b) $k = 0$ (c) $k = -1$ (d) None of these

038. How many polynomials can be obtained with zeros 1 and 3.
(a) 2 (b) 3 (c) 1 (d) Infinite number of polynomials.

039. The degree of Polynomial $(x-1)(x^3 - x^2 - x - 2)$ is (a) 1 (b) 2 (c) 3 (d) 4

040. The degree of polynomial. $f(x) = \frac{1}{x^2}\left(2x^3 + 2x^2 + \frac{x^2+1}{2}\right)$ is (a) 1 (b) 2 (c) 3

041. The degree of polynomial $f(x) = (x-1)(-x^2 + 2x - x^3 + 2)$ is (a) 1 (b) 4 (c) 2.

042. A quadratic polynomial whose zeros are -3 & 4 is (a) $x^2 - x + 12$
(b) $x^2 + x + 12$ (c) $\frac{x^2}{2} + \frac{x}{2} + 6$ (d) $\frac{x^2}{2} + \frac{x}{2} - 6$ (d) None

043. If α and β are zeros of $x^2 - 4x + 1$ then $\left(\frac{1}{\alpha} + \frac{1}{\beta} - \alpha\beta\right)$ is
(a) 3 (b) 5 (c) -5 (d) -3.

044. The value of 'm' for which the polynomial $f(x)=x^3+4x^2-mx+8$ is exactly divisible by $(x-2)$. (a) 0 (b) 2 (c) 16 (d) None of there

045. If $(y+1)$ is a factor of $(y^2+3a-7-3ay)$, then value of a is
(a) 1 (b) -1 (c) 2 (d) -2 (e) None of these

046. If α and β are the (x^2-6x+k), what is the value of 'k' if $3\alpha+2\beta=20$.
(a) -16 (b) 16 (c) 0 (d) 8 (e) None of there

047. The number of zeros of polynomial $f(x)=(x+2)^3+16$ is (a) 3 (b) 2 (c) 4.

048. Graph of a quadratic polynomial is a (a) Linear (b) Parabola (c) Ellipse.

049. If α and β are the zeros of the polynomial (x^2-16). then $\alpha\beta(\alpha+\beta)=??$
(a) -1 (b) 1 (c) 16 (d) None

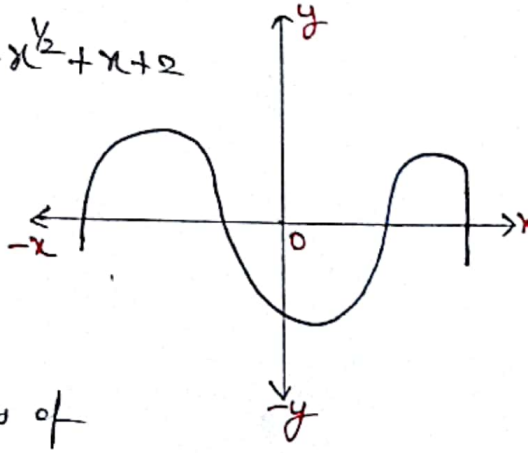
050 Zeros of the polynomial can be expressed graphically. Number of zeros of polynomial is equal to the no. of points where the graph of polynomial is
(a) Intersect y axis (b) Intersect x axis
(c) Intersect x or y axis (d) Do not touches the x or y axis

051. Zeros of polynomial $f(x)=x^2-8$ is (a) ± 2 (b) $\pm\sqrt{2}$ (c) $\pm 2\sqrt{2}$

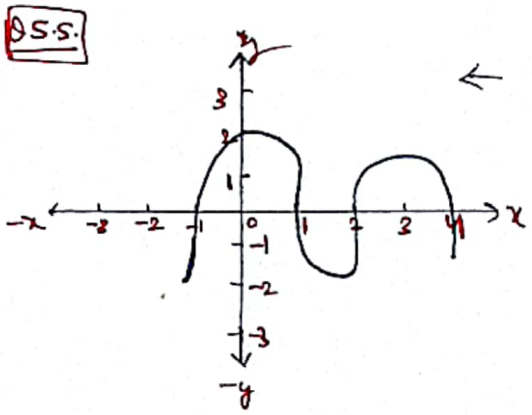
052 If one root of the polynomial $f(x)=kx+13x+5x^2$ is reciprocal of the other then value of "k" is (a) 6 (b) 0 (c) 5 (d) None

053 Which of the following is a polynomial.
(a) $\sqrt{x}+2x^2+5x+3$. (c) $5x+6$.
(b) $x^2+x+\frac{2}{x}$ (d) $x^{1/4}+x^{1/3}+x^{1/2}+x+2$

054. In this figure of graph, the number of zeros of the polynomial $f(x)$ is
(a) 1 (b) 3 (c) 5 (d) None of there.



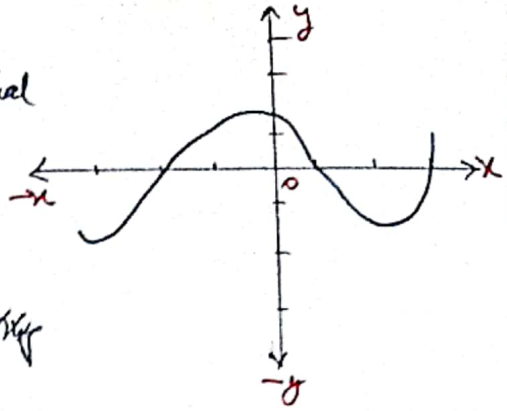
055.



← from this graph zeros of polynomial $f(x)$ is represented by
(a) (2, -1, 0, 4) (c) (-4, -2, 1, -1)
(b) (4, 2, 1, -1) (d) None of these

056 from this graph, determine which type of polynomial is this (a) Quadratic polynomial

(b) Cubic (c) Biquadratic (d) Linear.



057. Cubic polynomials widely used in ~~Construction~~ Constructing the diagrams of real life —

(a) Roller Coaster (b) Railway tracks

(c) Bridges (linear) (d) None of these

058. If one zero of polynomial $4x^2 - 8kx - 9$ is negative of the other, find the value of 'k'. (a) $k=-8$ (b) $k=0$ (c) $k>1$ (d) None

059. If one zero of the polynomial $(a^2+9)x^2 + 13x + 6a$ is reciprocal of the other, find the value of 'a' (a) 3 (b) 6 (c) -3 (d) None

060. Which one of the following is not a Quadratic polynomial.

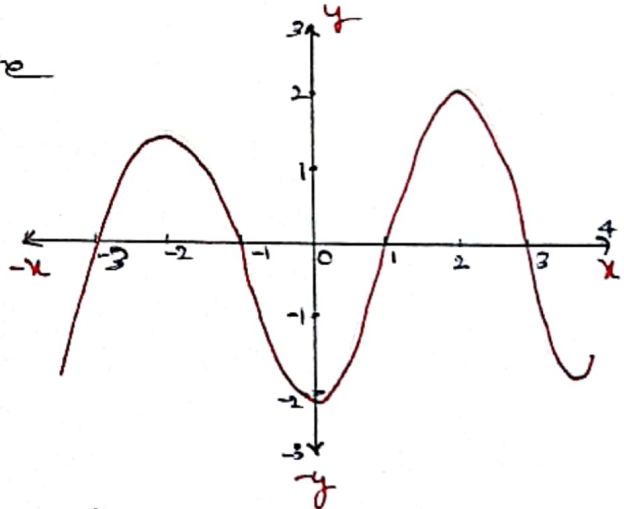
(a) $2 - x^2 + \sqrt{3}x$ (b) $\frac{u}{3} - 2u^2 + 5$ (c) $4\frac{2}{8} + \frac{1}{7}$ (d) $\frac{5t}{6} + 6$

061. A quadratic polynomial can have

(a) At least 2 zeros. (c) only 1 zero.

(b) At most 2 zeros (d) None of these

062. From the given graph answer the following questions:



(I) This graph represent which equation

(a) Quadratic (b) linear

(c) Cubic (d) Biquadratic.

(II) The number of zeros of the from the graph is (a) 1 (b) 4 (c) 3 (d) 0

(III) The zeros are (a) $(-3,-2,1,3)$ (b) $(-3,-1,1,3)$ (c) $(-2,-1,1,3)$ (d) None

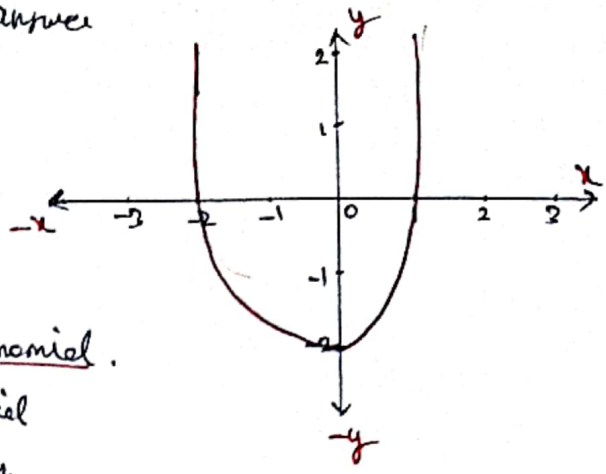
063. The above graph of (Question No. 62) represents equation —

(a) $2x+5$ (b) $2x^2+5x+2$ (c) $2x^3+5x^2+2x+1$ (d) None

064. The zeros of the polynomial $f(y) = 4\sqrt{3}y^2 + 5y - 2\sqrt{3}$ are.

(a) $\frac{2}{\sqrt{3}}, \frac{\sqrt{3}}{4}$ (b) $\frac{-2}{\sqrt{3}}, \frac{\sqrt{3}}{4}$ (c) $\frac{2}{\sqrt{3}}, -\frac{\sqrt{3}}{4}$ (d) $\frac{-2}{\sqrt{3}}, -\frac{\sqrt{3}}{4}$

Q65 Observe the given graph carefully and answer the following questions.



(I) The shape of the graph is
(a) Ellipse (b) Spiral (c) Parabola

(II) The graph represents which equation/polynomial.
(a) Linear polynomial (b) Cubic polynomial
(c) Biquadratic polynomial (d) None of these

(III) The number of zeros are (a) 1 (b) 3 (c) 4 (d) None of these

(IV) The expression of the polynomial represented by the graph is
(a) x^2+x-2 (b) x^2-x-2 (c) x^2-x+2 (d) None of these

(V) If the polynomial $ax^2+5x+3a$, given that (sum of zeros) = (product of zeros) then value of 'a' is (a) $\frac{5}{3}$ (b) $\frac{-5}{3}$ (c) $\frac{-3}{5}$ (d) None

Q66. Ramesh's father gave him some money to buy chocolates at the rate of $f(x) = 2x^2-8x-24$. Let α and β are the zeros of $f(x)$ then answer the following questions.

(I) find the value of α and β. (a) -2, 6 (b) 6, 2 (c) -6, -2 (d) 6, -2

(II) find the value of $\left(\frac{1}{\alpha}+\frac{1}{\beta}\right)$ (a) $\frac{-1}{4}$ (b) $\frac{-1}{3}$ (c) $\frac{1}{3}$ (d) None

(III) find the value of $f(-1)$ from the $f(x)$ = (a) -8 (b) 8 (c) 0 (d) None

Q67 find the quadratic polynomial whose zeros are -3 & -4.
(a) x^2-4x+2 (b) x^2-x-12 (c) $x^2-7x+12$ (d) None of these.

Q68. The quadratic equation whose one zero is 6 and sum of zeros is 0 is.
(a) x^2-6 (b) x^2-12 (c) x^2+36 (d) x^2-36.

Q69 For a quadratic polynomial $2x^2-8x+k$, sum of roots = 4 and one of the root is $\left(\frac{4+\sqrt{2}}{2}\right)$ then value of k is (a) -7 (b) 7 (c) $4+\sqrt{7}$ (d) None

Q70.