OBJECTIVE TYPE

Question No: 1

If 2 and 3 are zeroes of polynomial $3x^2 - 2kx + 2m$, then the values of k and m are

(a) $m = \frac{9}{2}$ and $k = 15$ (b) $m = \frac{15}{2}$ and $k = 9$

(c) $m = 9$ and $k = \frac{15}{2}$ (d) $m = 15$ and $k = 9$

Question No: 2

Sum of zeroes of Quadratic polynomial

$= -\frac{\text{Coefficient of } x}{\text{Coefficient of } x^2}$

(a) True (b) False (c) Can't say

Question No: 3

- $p(x) = 5x^3 - 3x^2 + 7x + 2$, then match the value of Column I with that of Column II

	Column I		Column II
A.	$p(1)$	P.	2
B.	$p(0)$	Q.	11
C.	$p(5)$	R.	-13
D.	$p(-1)$	S.	-64
E.	$p(-2)$	T.	587

	A	B	C	D	E
(a)	Q	T	R	P	S
(c)	Q	P	T	R	S

	A	B	C	D	E
(b)	Q	R	T	S	P
(d)	T	R	Q	S	P

Question No: 4

The value of p, for which (-4) is a zero of the polynomial $x^2 - 2x - (7p + 3)$ is

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

Question No: 5

The quadratic polynomial, the sum of whose zeroes is -5 and their product is 6, is

(a) $x^2 + 5x + 6$ (b) $x^2 - 5x + 6$ (c) $x^2 - 5x - 6$ (d) $-x^2 + 5x + 6$

Question No: 6

If α and β are the zeroes of $4x^2 + 3x + 7$, then the value of $\frac{1}{\alpha} + \frac{1}{\beta}$ is

(a) $-\frac{8}{7}$ (b) $-\frac{3}{7}$ (c) $\frac{2}{7}$ (d) $\frac{6}{8}$

Question No: 7

If α and β are the zeroes of the quadratic polynomial $f(x) = 3x^2 - 5x - 2$, then $\alpha^3 + \beta^3$ is equal to

(a) $\frac{215}{27}$ (b) $\frac{357}{21}$ (c) $\frac{115}{28}$ (d) $\frac{325}{31}$

Question No: 8

The quadratic polynomial whose zeroes are $2\sqrt{7}$ and $-5\sqrt{7}$ is

(a) $x^2 - 3\sqrt{7}x - 70$ (b) $x^2 + 3\sqrt{7}x + 70$
(c) $x^2 + 3\sqrt{7}x - 70$ (d) $x^2 - 3\sqrt{7}x + 70$

Question No: 9

1 and 2 are the zeroes the polynomial $x^2 - 3x + 2$

(a) I rue (b) -alse (c) Can't say (d) Partially true/false

Question No: 10

If α and β are zeroes of the polynomial $x^2 - p(x + 1) + c$ such that $(\alpha + 1)(\beta + 1) = 0$, then the value of c is

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

Question No: 11

If the sum and difference of zeroes of quadratic polynomial are -3 and -10, respectively. Then, the difference of the squares of zeroes is

(a) 20 (b) 30 (c) 15 (d) 25

Question No: 12

Zeroes of $p(z) = z^2 - 27$ are .....

and .....

(a) $\pm 3\sqrt{3}$ (b) $+3$

(c) $+9$ (d) $+\sqrt{3}$ and $-\sqrt{3}$

Question No: 13

If one zero of polynomial $x^2 - 4x + 1$ is $2 + \sqrt{3}$, then other zero will be .....

(a) $-2 + \sqrt{3}$ (b) $-\sqrt{3} - 2$ (c) $2 - \sqrt{3}$ (d) $\sqrt{3} + 1$

Question No: 14

If the graph of a polynomial intersects the X-axis at only one point, it can be a

(a) linear (b) quadratic (c) cubic (d) None of these

Question No: 15

The value of k such that the polynomial $x^2 - (k + 6)x + 2(2k - 1)$ has sum of its zeroes equal to half of their product is

(a) -4 (b) 4 (c)-7 (d) 7

Question No: 16

The number of polynomials having zeroes as -2 and 5 is

(a) 1 (b) 2 (c) 3 (d) more than 3

Question No: 17

If one of the zeroes of a quadratic polynomial of the form $x^2 + ax + b$ is the negative of the other, then it

(a) has no linear term and the constant term is negative

(b) has no linear term and the constant term is positive

(c) can have a linear term but the constant term is negative

(d) can have a linear term but the constant term is positive

Question No: 18

If one of the zeroes of the quadratic polynomial $(k - 1)x^2 + kx + 1$ is -3, then the value of k is

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

Question No: 19

If α and β are the zeroes of the polynomial $2y^2 + 7y + 5$, then the value of $\alpha + \beta + \alpha\beta$ is

(a) -1 (b) 0 (c) 1 (d) 2

Question No: 20

Every real number is the zeroes of zero polynomial

(a) True (b) False (c) Can't say (d) Partially true/False

Question No: 21

Which of the following is not a polynomial

(a) $3x + 5$ (b) $3y^3 - 4y^2 + 2y$ (c) $x^3 - 3$ (d) $\frac{1}{x+2}$

Question No: 22

If sum of the squares of zeroes of the quadratic polynomial $f(x) = x^2 - 4x + k$ is 20, then the value of k is

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

Question No: 23

If sum and product of zeroes of quadratic polynomial are, respectively 8 and 12 , then their zeroes are

(a) 2 and 6 (b) 3 and 4 (c) 2 and 8 (d) 2 and 5

Question No: 24

The zeroes of the quadratic polynomial $\left(x^2 + 5x + 6\right)$ are

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

Question No: 25

If α and β are the zeroes of the polynomial $2x^2 - 4x + 5$, then match the value of Column I with that of Column II

	Column I		Column I
A.	$\frac{1}{\alpha} + \frac{1}{\beta}$	1.	-6
B.	$(\alpha - \beta)^2$	2.	$\frac{-4}{25}$
C.	$\frac{1}{\alpha^2} + \frac{1}{\beta^2}$	3.	$\frac{-2}{5}$
D.	$\frac{\alpha}{\beta} + \frac{\beta}{\alpha}$	4.	$\frac{4}{5}$

	A	B	C	D
(a)	4	1	2	3
(c)	1	2	3	4

	A	B	C	D
(b)	4	2	1	3
(d)	1	4	2	3

Question No: 26

If α and β are the zeroes of the quadratic polynomial $f(x) = x^2 + x - 2$, then the polynomial whose zeroes are $2\alpha + 1$ and $2\beta + 1$ is

(a) $x^2 + 9$ (b) $x^2 - 4$ (c) $x^2 - 9$ (d) $x^2 + 4$

Question No: 27

The graph of a quadratic polynomial is .....

(a) straight line (b) parabola (c) hyperbola (d) None of these

Question No: 28

If α and β are zeroes of the quadratic polynomial $x^2 - 6x + a$ the value of ' a ', if $3\alpha + 2\beta = 20$ is -12

(a) True (b) False (c) Can't say (d) Partially True/False

Question No: 29

If α and β are zeroes of a quadratic polynomial $x^2 - 5$, then the quadratic polynomial whose zeroes are $1 + \alpha$ and $1 + \beta$ is

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

Question No: 30

The sum and the product of zeroes of the polynomial $f(x) = 4x^2 - 27x + 3k^2$ are equal the value of k is

(a) $k = 3$ (b) $k = -3$ (c) $k = \pm 3$ (d) $k = 2$

Question No: 31

If p and q are zeroes of $3x^2 + 2x - 9$ then value of $p - q$ is

(a) -3 (b) $-\frac{2}{3}$ (c) $\pm\frac{4\sqrt{7}}{3}$ (d) None of these

Question No: 32

If zeroes α and β of a polynomial $x^2 - 7x + k$ are such that $\alpha - \beta = 1$, then the value of k is

(a) 21 (b) 12 (c) 9 (d) 8

Question No: 33

If α and β are the zeroes of the quadratic polynomial $f(x) = x^2 - 4x + 3$, then the value of $\alpha^4\beta^3 + \alpha^3\beta^4$ is

(a) 104 (b) 108 (c) 112 (d) 5

Question No: 34

The zeroes of the quadratic polynomial $f(x) = abx^2 + \left(b^2 - ac\right)x - bc$ are

(a) $\frac{b}{ac}$ and $\frac{c}{b}$ (b) $\frac{ab}{c}$ and $\frac{a}{b}$

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

Question No: 35

If one zero of the polynomial $3x^2 - 8x + 2k + 1$ is seven times the other, then the value of k is

(a) $\frac{2}{5}$ (b) $\frac{2}{3}$ (c) $\frac{2}{7}$ (d) $\frac{3}{2}$

Question No: 36

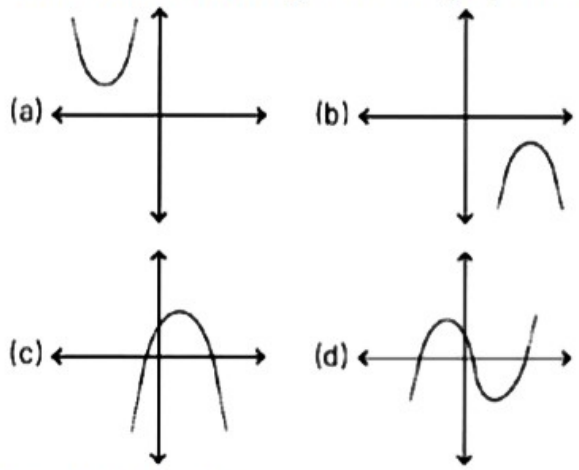
The polynomial whose zeroes are $(\sqrt{2} + 1)$ and $(\sqrt{2} - 1)$ is

(a) $x^2 + 2\sqrt{2}x + 1$ (c) $x^2 + 2\sqrt{2}x - 1$

(b) $x^2 - 2\sqrt{2}x + 1$ (d) $x^2 - 2\sqrt{2}x - 1$

Question No: 37

Which of the following is not the graph of a quadratic polynomial?



Question No: 38

If 2 is a zero of polynomial $f(x) = ax^2 - 3(a-1)x - 1$, then the value of a is

(a) 0 (b) 2 (c) $\frac{5}{2}$ (d) $\frac{1}{2}$

Question No: 39

If the zeroes of the quadratic polynomial $x^2 + (a+1)x + b$ are 2 and -3, then

(a) $a = -7, b = -1$ (b) $a = 5, b = -1$

(c) $a = 2, b = -6$ (d) $a = 0, b = -6$

Question No: 40

If m and n are the zeroes of the polynomial $3x^2 + 11x - 4$, then find the value of $\frac{m}{n} + \frac{n}{m}$

(a) $\frac{145}{12}$ (b) $-\frac{145}{12}$ (c) $\frac{145}{7}$ (d) $\frac{-145}{15}$

Question No: 41

The number of value of k for which the quadratic polynomial $kx^2 + x + k$ has equal zeroes is
(a) 4 (b) 1 (c) 2 (d) 3

Question No: 42

The quadratic polynomial, whose zeroes are $3 + \sqrt{2}$ and $3 - \sqrt{2}$, is
(a) $x^2 - 3x + 5$ (b) $x^2 - 6x + 7$ (c) $x^2 - 7x + 6$ (d) $x^2 - 8x + 12$

Question No: 43

$p(x) = x - 1$ and $g(x) = x^2 - 2x + 1, p(x)$ is a factor of $g(x)$
(a) True (b) False (c) Can't Say (d) Partially True/False

Question No: 44

If one of the zeroes of the quadratic polynomial $x^2 + 3x + k$ is 2 , then the value of k is
(a) 10 (b) -10 (c) -7 (d) -2

Question No: 45

The value of k for which 3 is a zero of polynomial $2x^2 + x + k$ is
(a) 21 (b) 20 (c) -21 (d) 18

Assertion-Reason Question

Question No: 46

Assertion (A) A quadratic polynomial having 4 and 3 as zeroes is $x^2 - 7x - 12$
Reason (R) The quadratic polynomial having α and β as zeroes is given by
$p(x) = x^2 - (\alpha + \beta)x + \alpha \cdot \beta$
(a) A is true, R is true ; R is a correct explanation for A.
(b) A is true, R is true; R is not a correct explanation for A.
(c) A is true; R is False.
(d) A is false; R is true.

Question No: 47

Assertion (A) If the zeroes of $x^2 + px + q$ are two consecutive integers, then $p^2 - 1 = 4q$
Reason (R) If α, β are zeroes of $(x - a)(x - b) - c$, then a, b are zeroes of $(x - \alpha)(x - \beta) + c$
(a) A is true, R is true ; R is a correct explanation for A.
(b) A is true, R is true; R is not a correct explanation for A.
(c) A is true; R is False.
(d) A is false; R is true.

Question No: 48

Assertion (A) The factor of $\frac{3}{2}x^2 - 8x - \frac{35}{2}$ is $\frac{1}{2}(x - 7)(3x + 5)$
Reason (R) The factors are calculated by dividing the coefficients by 2 and expression is obtained by splitt
(a) A is true, R is true ; R is a correct explanation for A.
(b) A is true, R is true; R is not a correct explanation for A.
(c) A is true; R is False.
(d) A is false; R is true.ing the middle term

Question No: 49

Assertion (A) $x^2 + 4x + 5$ has two zeroes.
Reason (R) A quadratic polynomial can have atmost two zeroes.
(a) A is true, R is true; R is a correct explanation for A.
(b) A is true, R is true; R is not a correct explanation for A.
(c) A is true; R is False.
(d) A is false; R is true.

Question No: 50

Assertion (A) If m and n are the zeroes of the polynomial $3x^2 + 11x - 4$ then
$12\left(m^2 + n^2\right) + 145mn = 6$

Reason $(\mathbf{R})$ If α and β are the zeroes of the polynomial $ax^2 + bx + c$, then $\frac{\alpha}{\beta} + \frac{\beta}{\alpha} = \frac{b^2}{ac} + 2$

(a) A is true, R is true ; R is a correct explanation for A.
(b) A is true, R is true; R is not a correct explanation for A.
(c) A is true; R is False.
(d) A is false; R is true.

Question No: 51

Assertion (A) If $x^2 + x - 12$ divides $p(x) = x^3 + ax^2 + bx - 84$ exactly, then $a = -8$ and $b = -5$
Reason (R) When a polynomial $p(x)$ is completely divided by $(x - \alpha)$, then $p(x) = 0$

(a) A is true, R is true ; R is a correct explanation for A.
(b) A is true, R is true; R is not a correct explanation for A.
(c) A is true; R is False.
(d) A is false; R is true.