

# Polynomials

Question 1.

For a polynomial  $p(x)$ ,  $x-2$  is a factor, so  $p(2)$  is \_\_\_\_\_

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

Answer: (b) 0

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Question 2.

A polynomial with one degree is called:

- (a) Linear polynomial
- (b) Quadratic polynomial
- (c) Monomial
- (d) Binomial

Answer: (a) Linear polynomial

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Question 3.

$\sqrt{3}$  is a polynomial of degree:

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

Answer: (b) 0

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Question 4.

A polynomial of degree 5 in  $x$  has at most

- (a) 5 terms

- (b) 4 terms
- (c) 6 terms
- (d) 10 terms

Answer: (c) 6 terms

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Question 5.

If  $x + 2$  is a factor of  $x^3 - 2ax^2 + 16$ , then value of  $a$  is

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

Answer: (b) 1

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Question 6.

If  $3 + 5 - 8 = 0$ , then the value of  $(3)^3 + (5)^3 - (8)^3$  is

- (a) 260
- (b) -360
- (c) -160
- (d) 160

Answer: (b) -360

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Question 7.

The value of  $k$  for which  $x - 1$  is a factor of the polynomial  $4x^3 + 3x^2 - 4x + k$  is :-

- (a) 3
- (b) 0
- (c) 1
- (d) -3

Answer: (d) -3

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Question 8.

Evaluate  $(11)^3$

- (a) 1313
- (b) 1331
- (c) 3131
- (d) 3113

Answer: (b) 1331

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Question 9.

Factoring  $3x^2 - 5x + 2$

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

Answer: (a)  $(3x-2)(x-1)$

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Question 10.

$x-a$  is a factor of  $p(x) = ax^2 + bx + c$ . Which of the following is true?

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

Answer: (b)  $p(a) = 0$

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Question 11.

A binomial of degree 20 in the following is:

- (a)  $20x + 1$
- (b)  $\frac{x}{20} + 1$
- (c)  $x^{20} + 1$
- (d)  $x^2 + 20$

Answer: (c)  $x^{20} + 1$

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Question 12.

Degree of zero polynomial is:

- (a) 1
- (b) Any natural number
- (c) 0
- (d) Not defined

Answer: (d) Not defined

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Question 13.

For a polynomial  $p(x)$ ,  $p(-1)$  and  $p(2)$  are both equal to zero .So, we can conclude that,

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

Answer: (c)  $(x^2 - x - 2)$  is a factor

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Question 14.

What is the degree of a zero polynomial?

- (a) 0
- (b) 1
- (c) Any natural number
- (d) Not defined

Answer: (d) Not defined

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Question 15.

The zero of the polynomial  $f(x) = 2x+7$  is

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

Answer: (d)  $\frac{-7}{2}$

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Question 16.

Find the value of  $a$  such that  $(x - 2)$  is the factor of the polynomial  $x^4 + ax^3 + 2x^2 - 3x$

- (a)  $a = \frac{-3}{4}$
- (b)  $a = \frac{3}{4}$
- (c)  $a = \frac{-9}{4}$
- (d)  $a = \frac{9}{4}$

Answer: (a)  $a = \frac{-3}{4}$

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Question 17.

If  $x + 2$  is a factor of  $x^3 - 2ax^2 + 16$ , then value of  $a$  is

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

Answer: (b) 1

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Question 18.

The value of  $p(t) = 2 + t + 2t^2 - t^3$  when  $t=0$  is

- (a) 2
- (b) 1
- (c) 4
- (d) 0

Answer: (a) 2

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Question 19.

$1 + 3x$  is a \_\_\_\_\_ polynomial.

- (a) Linear
- (b) Quadratic
- (c) Cubic
- (d) None of the above

Answer: (a) Linear

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Question 20.

The value of  $p$  for which  $x + p$  is a factor of  $x^2 + px + 3 - p$  is:

- (a) -3
- (b) 3
- (c) 1
- (d) -1

Answer: (b) 3

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Question 21.

Solution of a quadratic equation  $x^2 + 5x - 6 = 0$

- (a)  $x = -1, x = 6$

- (b)  $x = 1, x = -6$
- (c)  $x = 1$
- (d)  $x = 6$

Answer: (b)  $x = 1, x = -6$

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Question 22.

$x^2 - x$  is \_\_\_\_\_ polynomial.

- (a) Linear
- (b) Quadratic
- (c) Cubic
- (d) None of the above

Answer: (b) Quadratic

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