

CBT EXAM JUNE- JULY (2025-26)
CLASS X (MATHS)

SYLLABUS :

CHAPTER 4 : QUADRATIC EQUATIONS

CHAPTER 5 : ARITHMETIC PROGRESSION

Q 1 : If the Quadratic equation $ax^2 + bx + c = 0$ has two real and equal roots ,then 'c' is equal to :

- (a) $-b/2a$ (b) $b/2a$ (c) $-b^2/4a$ (d) $b^2/4a$

Q 2 : Which of the following is NOT a Quadratic equation :

- (a) $3(y - 1)^2 = 6y^2 - 3y + 1$ (b) $4x - x^2 = x^2 + 7$
(c) $(\sqrt{5}x + \sqrt{7})^2 + x^2 = 4x^2 - 5x$ (d) $(x^2 + 2x)^2 = x^4 + 3 + 4x^3$

Q 3 : The n^{th} term of an AP (a, a+d, a+2d) is :

- (a) $a+(n+1)d$ (b) $a+(n-1)d$ (c) $a-(n-1)d$ (d) $a(n-1)d$

Q 4 : Common difference of an AP (a-3d, a-d, a+d, a+3d) is :

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

Q 5 : Standard form of Quadratic equation is :

- (a) $ax^2 + cx$ (b) $ax^2 - bx + c = 0$
(c) $ax^2 + bx + c = 0$ (d) $ax^2 + bx + c = 0$

Q 6 : Real roots are NOT possible if Discriminant for Quadratic equation gives :

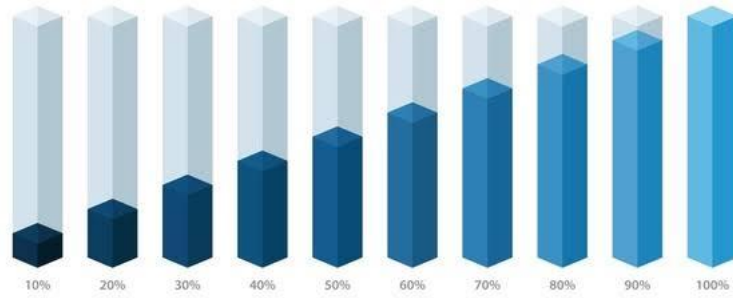
- (a) $b^2 - 4ac < 0$ (b) $b^2 + 4ac < 0$
(c) $b^2 - 4ac > 0$ (d) $-b^2 + 4ac < 0$

Q 7 : The n^{th} term for an AP $(4 - \frac{1}{n}) + (4 - \frac{1}{n}) + (4 - \frac{1}{n}) + \dots$ is :

- (a) $(4 - \frac{n-1}{n})$ (b) $(4 - \frac{n}{n})$
(c) $(4 - n)$ (d) $(4 - \frac{n+1}{n})$

CASE STUDY BASED :

If availability of smart phones in seema's society is increasing every 2 years as per the graph represents. Then, figure out the data for the following :



Q 8 : In which year the whole society will be equipped with the smart phones? If it is 10% of the population in 2025.

- (a) 2030 (b) 2045 (c) 2035 (d) 2040

Q 9 : In 10 years from now how much of the society will be having smart phones?

- (b) 20% (b) 30% (c) 40% (d) 50%

Q 10 : If n th term of an AP is given by $a_n = 5n + 3$ then common difference of an AP is :

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

ANSWER KEY

Q 1 : (d) $b^2/4a$

Q 2 : (c) $(\sqrt{5}x + \sqrt{7})^2 + x^2 = 4x^2 - 5x$

Q 3 : (b) $a + (n-1)d$

Q 4 : (c) $2d$

Q 5 : (d) $ax^2 + bx + c = 0$

Q 6 : (a) $b^2 - 4ac < 0$

Q 7 : (b) $(4 - \frac{n}{n})$

Q 8 : (b) 2045

Q 9 : (d) 50%

Q 10 : (a) 5