

## Chapter 1: Real Numbers

### 1 Mark Questions:

1. Express 0.36 as a fraction in its simplest form.
2. Find the HCF of 24 and 36 using the prime factorization method.

### 2 Mark Questions:

1. State Euclid's Division Lemma and apply it to find the HCF of 56 and 72.
2. Show that  $\sqrt{2}$  is an irrational number

### 3 Mark Questions:

1. Use Euclid's algorithm to find the HCF of 252 and 180. 2. Prove that  $3 + \sqrt{2}$  is irrational

## Chapter 2: Polynomials

### 1 Mark Questions:

1. Find the value of if  $z^3 - 32$  is a factor of  $22z^3 - 12$  (isko mat)

karna).

2. What is the degree of the polynomial

2 Mark Questions:

1. If  $a$  and  $b$  are the zeros of the polynomial  $S+6$ , find the

value of  $a+b$  and 2. Find the remainder when  $3z^2-4z-2$  is divided by  $z-1$

3 Mark Questions:

1. Find the zeros of the polynomial  $25z^3$  and verify the relationship between the zeros and coefficients.

2. If  $a$  and  $b$  are the zeros of the polynomial  $3z^2-4z-1$ , find a quadratic polynomial whose zeros are  $0$  and

Chapter 3: Pair of Linear Equations in Two Variables

1 Mark Questions:

1. Determine whether  $(1, 1)$  is a solution of the pair of equations  $x+y=2$  and

$z-y=0$ .

2. Write the condition for a pair of linear equations to have infinitely many solutions

2 Mark Questions:

1. Solve the system of equations by substitution method  $3z+2y=8$ ,  $2x-3$ .

2. Find the value of  $k$  for which the system of equations  $3z+ky=5$  and  $6z+2y=10$  has no solution.

3 Mark Questions:

1. Solve the following system of equations by elimination method.

$2z+3y=12$  and

$3z-5y=1$

2. Solve the following pair of equations graphically:

Chapter 4: Quadratic

Equations 1 Mark

Questions:

1. Find the value of  $k$  for which  $2kz+3=0$  has equal roots.
2. Write the quadratic equation whose roots are 3 and 4.

2 Mark Questions:

1. Solve the quadratic equation  $2z^2-3z-4=0$  by factorization.

2. If one root of the equation  $2z^2-7z+12=0$  is 3, find the other root.

3 Mark Questions:

1. Solve the quadratic equation  $2z^2-5z+3=0$  using the quadratic formula.

2. A quadratic equation has roots 3 and 2. Find the quadratic equation.

Chapter 5: Arithmetic Progressions

1 Mark Questions:

1. Find the 15th term of the arithmetic progression: 3, 7, 11, 15, ...  
The 10th term of an arithmetic progression is 47. If the first term is 5, find the common difference.

difference.

### 2 Mark Questions:

1. If the sum of the first 7 terms of an arithmetic progression is 105, find the 7th term.

2. Find the sum of the first 20 terms of the arithmetic progression:  
1, 4, 7, 10,

### 3 Mark Questions:

1. Find the sum of the first 15 terms of the arithmetic progression: 5, 8, 11, 14,

2. If the sum of the first  $n$  terms of an arithmetic progression is  $32n$ , find the  $n$ th term of the arithmetic progression..

## Chapter 6: Triangles

### 1 Mark Questions:

1. In  $\triangle ABC$ ,  $DE \parallel BC$  and  $AD = 2DB = 4$ , find 2. State the Pythagoras theorem

### 2 Mark

Questions:

1. In  $\triangle ABC$ ,  $AB = BC = AC$ , prove that  $B = 90^\circ$
2. in a right-angled triangle, the length of the hypotenuse is 10 cm and one of the sides is 6 cm. Find the other side.

3 Mark Questions:

1. Prove that the ratio of the areas of two similar triangles is equal to the square of the ratio of their corresponding sides.
2. in  $\triangle ABC$ ,  $D$  is a point on side  $BC$  such that  $AD \perp BC$ . Prove that  $AB^2 - AC^2 = DC \cdot BC$

Chapter 8: Introduction to

Trigonometry

1 Mark Questions:

1. Find the value of  $\sin 30^\circ + \cos 60^\circ$
2. What is the value of  $\tan$

457

2 Mark Questions:

1. If  $\sin A$ , find the value of  $\cos 4$

2. Evaluate  $\cos 60 \sin 30$

3 Mark Questions:

1. Prove that  $\sin 0 + \cos 201$

2. If  $\sec \theta = 2$ , find the value of  $\sin$  and  $\cos$

Chapter 9: Applications of Trigonometry

1 Mark Questions:

1. What is the angle of elevation of the sun when the length of the shadow of a pole is equal to its height?

2. Define angle of depression.

2 Mark

Questions:

1. The angle of elevation of a tree is  $30^\circ$ . If the height of the tree is 20 m, find the distance of the observer from the tree
2. From the top of a tower 50 m high, the angle of depression of a car on the ground is  $30^\circ$ . Find the distance of the car from the base of the tower.

3 Mark Questions:

1. A tower is 60 m high. The angle of elevation of the top of the tower from a point on the ground is  $30^\circ$ . Find the distance of the point from the base of the tower
2. Two ships are on opposite sides of a lighthouse. The angle of elevation of the top of the lighthouse from the two ships are  $30^\circ$  and  $45^\circ$  respectively. If the height of the lighthouse is 50 m, find the distance between the two ships

Kuch spelling samajh nahi to puch lena Yuvraj.