**Assignment – 4**

Assigned To = All 10 Class Student

Note: All Questions are compulsory to attempt

**Chapter = QUADRATIC EQUATIONS**

**Submission Date = See on portal MM = 30**

Q1. **If -5 is a root of the quadratic equation 2x2 + px – 15 = 0 and the quadratic equation p(x2 + x) + k = 0 has equal roots, find the value of k.**

Q2. **Solve for x: [1/(x + 1)] + [3/(5x + 1)] = 5/(x + 4); x ≠ -1, -⅕, -4**

Q3. **Find the value of p, for which one root of the quadratic equation px2 – 14x + 8 = 0 is 6 times the other.**

Q4. **In a flight of 600 km, an aircraft was slowed due to bad weather. Its average speed for the trip was reduced by 200 km/hr and the time of flight increased by 30 minutes. Find the original duration of the flight.**

Q5. **Find the discriminant of the equation 3x2– 2x +1/3= 0 and hence find the nature of its roots. Find them, if they are real.**

Q6. **Find the values of k for each of the following quadratic equations, so that they have two equal roots.**  
**(i) 2x2 + kx + 3 = 0**  
**(ii) kx (x – 2) + 6 = 0**

Q7. **The sum of the areas of two squares is 468 m2. If the difference of their perimeters is 24 m, find the sides of the two squares.**

**Q8. Solve the quadratic equation 2*x2* – 7*x* + 3 = 0 by using quadratic formula.**

Q9. **The diagonal of a rectangular field is 60 metres more than the shorter side. If the longer side is 30 metres more than the shorter side, find the sides of the field.**

Q10. **Find two consecutive positive integers, the sum of whose squares is 365.**