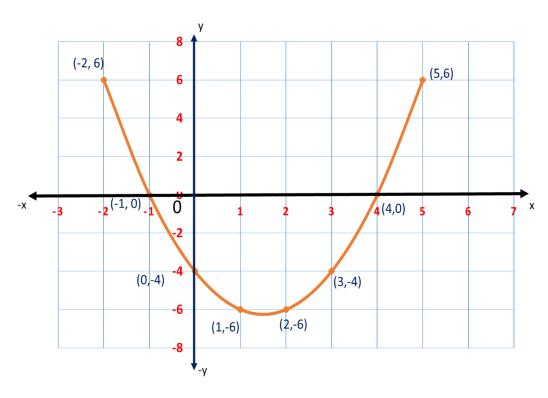CLASS- X (MATHS)- CBT                                              MARKS:10

1. . Due to heavy storm an electric wire got bent as shown in the figure. It followed  a mathematical  shape. Answer the following questions below.

(Each question is of 1 mark)



(i)      Name the shape in which the wire is bent

(A)  Spiral                    (B) ellipse            (C) linear                              (D)Parabola

Ans: (D)      Parabola

(ii)  How many zeroes are there for the polynomial (shape of the wire)

(A)  1                    (B)  3                    (C)  2                              (D)  0

Ans: (C) 2, As the curve intersect x axis at two points.

(iii)  The zeroes of the polynomial are

(A)  -1, 0                    (B)  1, 4                    (C)  -1 ,4              (D)  -4, -1

Ans: ( C) As the curve intersect x axis at -1,4

(iv) What will be the expression of the polynomial?

(A)  ) $x^2+2x +11$                    (B)  $x^2+3x-4$                    (C)  $x^2+3x+4$              (D)  $x^2-3x-4$

Ans: ( D) by plotting the curve

(v)  What is the value of the polynomial if x = 4?

    (A)  8                           (B)  0                        (C)  16                 (D)  none of these.

Ans: (b) 0 as 4 is the zero of the polynomial.

2. Two schools P and Q decided to award prizes to their students for two games of Hockey ₹$x$ per student and cricket ₹y per student. School P decided to award a total of ₹ 9500 for two games to 5 and 4 students respectively; while school Q decided to award ₹ 7370 for the two games to 4 and 3 students respectively.



 Based on the above information answer the following questions:

                                         (Each question is of 1 mark)

i) Form the pair of linear equations in two variables from this situation .

  (A) 5x +4y = ₹ 9500,  4x+3y =₹ 7370        (B)  4x +5 y = ₹ 9500,  3x+4y =₹ 7370

  (C) x + y= ₹ 9500 ,x+y= ₹ 7370           (D) 5x +4y = ₹ 7370,  4x+3y =₹ 9500

Explanation : Award for hockey is x /student and for cricket is y/student so 5 students means 5x and 4 students means 4x and a sum of ₹ 9500 for P and for Q 4 students for hockey so 4x and 3 students for cricket so 3y and a sum of ₹ 7370

Ans: (A) 5x +4y = ₹ 9500,  4x+3y =₹ 7370

ii) What is the prize amount of a student who played hockey?

    (A) ₹ 1150             (B) ₹ 980              (C) ₹880             (D) ₹1100

Ans: (B) by solving the linear equations of two variables  ₹ 980

iii) What is the prize amount of a student who played cricket ?

    (A) ₹ 980              (B) ₹880              (C) ₹ 1150           (D) ₹1100

Ans: (C) by solving the linear equations of two variables  ₹ 1150

iv) Prize amount on which game is more and by how much?

(A) Hockey, ₹ 100 (B) Hockey, ₹ 170 (C) Cricket, ₹ 100 (D) Cricket, ₹ 170

Ans: ( by solving the linear equations of two variables and calculating difference) D Cricket, ₹ 170

v) What will be the total prize amount if there are 2 students each from two games?

(A) ₹ 2130 (B) ₹ 4260 (C) ₹ 2200 (D) ₹2100.

Ans: (B) by solving the linear equations of two variables ₹ 4260