



CLASS TEST

MATHEMATICS

X

Time:1 hr

Max. Marks:20

- 1) Check whether the following are quadratic equations:  
a)  $(x+1)^2=2(x-3)$   
b)  $(x-2)(x+1)=(x-1)(x+3)$  (2\*2)
- 2) Find the values of  $k$  for the quadratic equation  $2x^2+kx+3=0$ , so that they have two equal roots. (2)
- 3) Find the roots of the quadratic equation  $100x^2-20x+1=0$ , by factorisation. (3)
- 4) Find two consecutive positive integers, sum of whose squares is 365. (3)
- 5) A cottage industry produces a certain number of pottery articles in a day. It was observed on a particular day that the cost of production of each article (in rupees) was 3 more than twice the number of articles produced on that day. If the total cost of production on that day was 90 rupees, find the number of articles produced and the cost of each article . (4)
- 6) 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. (4)