

class-X

Surprise Class Test Date: 25/06/26

F.M. - 15

Time: 35 minutes

- 1) Find the greatest number of 5 digits, that will give us remainder of 5, when divided by 8 and 9 respectively. 3
- 2) α, β are zeroes of the quadratic polynomial $x^2 - (k+6)x + 2(2k-1)$. Find the value of k if $\alpha + \beta = \frac{1}{2} \alpha \beta$. 2
- 3) The sum of the speeds of a boat in still water and the speed of current is 10 km/h. If the boat takes 40% of the time to travel same distance downstream when compared to that upstream, then find the difference of the speed of the boat when travelling upstream, and downstream. 3
- 4) There is one inlet pipe A and another outlet pipe B for a tank. Pipe B takes 6 hours more than pipe A to empty the tank. They opened alternatively for 1 min. each, starting with pipe A. After 42 min., $\frac{21}{160}$ part of tank is full. Find the time taken by pipe B to empty the full tank. 4

5) A bag contains 30 balls out of which x are green. If 10 more green balls are put in the box, the probability of drawing a green ball is double of what it was before. Find the value of x . [3]