ATOMIC ENERGY CENTRAL SCHOOL NARORA

UNIT TEST --2 **2018-19** **Time :** 90 Min

Class : XI, **Sub :** Mathematics , **Max.50**

General Instructions :

{i} Question Nos. 1 to 2 are carrying 1 mark each
{ii} Question Nos.3 to 5 are carrying 2 marks each
{iii} Question No.6 to 11are carrying 4 marks each.
{iv} Question No.12 and 14are carrying 6 mark each

1 Find the equation of the line parallel to y axis and passing through (2,3)

2: Find the slope of the line $y + x = 3$

3: A bag has 7 red balls and 8 blue balls two ball are drawn without replacement find the probability that both are same color

4: Find the equation of line which is passing through the points (1,1) and (2,4)

5: Evaluate $\lim_{x \to 0} \; l \times l / x$

6: A pair of dice is thrown ,find the probability of getting a total is 8 or doublets

7: Evaluate $\lim_{y \to 0} \frac{\tan y - \sin y}{y^3}$

8: Find the equation of the ellipse whose foci are at (3,0) and (–3,0) and passing through(4,1)

9: Evaluate $\lim_{x \to \pi/2} \frac{1 + \cos 2x}{(\pi - x)^2}$

10: Find the equation of the line passing through the intersection of the line $x + y+3 = 0$ and $2x - y + 2 = 0$ and parallel to the line $3x + y + 4 = 0$

11 :A single die is thrown three times ,find the probability getting a total of at most 6

12: Find the equation of parabola whose focus is (1,–1) and vertex (2 ,1)

13: : Find the equation of the circle passing through the points (4,–3) ,(1,– 2) and centre lies on the line $3x + 4y = 7$

14 : If p and q be the perpendicular from the origin upon the straight lines $x \sec \Phi + y \operatorname{Cosec} \Phi = a$ and $x \cos \Phi - y \sin \Phi = a \cos 2\Phi$,prove that $4p^2 + q2 = a^2$