LIONS SCHOOL, MIRZAPUR
UNIT TEST – II 2020-21

CLASS - XI TIME:50MIN.
SUBJECT - MATHEMATICS M.M.:25

General Instructions:-

1- All questions are compulsory.
2-Q.No.1 to 2 carries 1 mark each.
3-Q.No.3 to 5 carries 2 marks each.
4-Q.No.6 to 9 carries 4 marks each.
5-Q.No. 10 carries 5 mark.

Q1The foci of an ellipse are (+ - 20,0)and is eccentricity is 1/ 2. find equation of ellipse if centre is at origin

Q.2- Evaluate the limit - $\lim_{x\to 0} (\sin^2 5x)/x^2$.

Q.3- Find the equation of circle drawn on the intercept made by the line 2 X + 3 y = 6 between the co-ordinate Axes as diameter.

Q.4- Evaluate the limit

$\lim_{x\to 7} (4-\sqrt{9+x})/(1-\sqrt{8-x})$.

Q.5 Find equation of ellipse that passes through (1,4) and (-6,1) having centre at origin and major axis along x- axis

Q.6- Differentiate $x^2 \cos x$ from first principle

Q.7- Find the equation of the lines joining the vertex of parabola $y^2 = 6x$ to the point on it which have abscissa 24.

Q.8- if h and k is eccentricities of hyperbola and its conjugate prove-

$1/h^2 + 1/k^2 = 1$

Q9. Differentiate $\sqrt{\sin(4x+3)}$ from first principle.

Q.10- evaluate- $\lim_{x\to \pi} (1+\cos x)/\tan^2 x$.

OR

Evaluate-

$\lim_{x\to 0} (1-\cos x.\cos 2x.\cos 3x)/\sin^2 2x$