



SRM Institute of Science and Technology
Department of Mathematics
21MAB206T- Numerical Methods and Analysis
UNIT - 1 Tutorial Sheet-2

Part-A

1. Find the real positive root of $3x - \cos x - 1 = 0$ by Newton's method. *Ans.* 0.6071
2. Find an iterative formula to find the reciprocal of 19. *Ans.* 0.0526
3. Solve the system of equation by Gauss Elimination method

$$2x + y = 3;$$

$$7x - 3y = 4$$

$$\text{Ans. } x = y = 1$$

Part-B

4. Find the real root of $x^3 - x - 2 = 0$, by Newton's Raphson method. *Ans.* 1.521
5. Find the root of $\sin x = 1 + x^3$, by Newton's Raphson method. *Ans.* -1.249
6. Solve the following system of equation by Gauss Elimination method

$$3x + y - z = 3;$$

$$2x - 8y + z = -5;$$

$$x - 2y + 9z = 8.$$

$$\text{Ans. } x = y = z = 1$$

7. Apply Gauss Jordan method to find the solution of the following system

$$10x + y + z = 12;$$

$$2x + 10y + z = 13;$$

$$x + y + 5z = 7.$$

$$\text{Ans. } x = y = z = 1$$
