**TUTORIAL-1 NUMERICAL METHOD**

**Chapter ONE: Solution of Non-Linear equation**

1. Explain the importance of Numerical method in the field of science and Engineering.
2. Find the positive root of the equation correct to 3 decimal places using Bisection method.
3. Find the real equation by the fix point iteration method correct to six decimal places.
4. Calculate the real root of non-linear equation using Newton Rapson’s Method. The absolute error of function value at our calculated root be less than .
5. Find the least one root of with the accuracy of 0.08% using bisection method.
6. Find an approximate root of using secant method upto three decimal places of accuracy.
7. Find an approximate root of using N-R method upto three decimal places of accuracy.
8. Find the real root of =0 correct upto four decimal places using secant method.
9. Evaluate the real root of, using Newton’s Raphson Method. The absolute error of root in consecutive iteration should be less than 0.01%.
10. Round off the number 865250 and 37.46235 to four significant figures and compute relative, absolute and percentage errors.
11. Find the root of equation correct upto three decimal places using bisection method.
12. Find the root of equation correct upto three decimal places using false position method.
13. Write the advantage and disadvantage of
14. Bisection method
15. Secant method
16. N-R method
17. False position method
18. Fixed point iteration method.
19. Find the square root of 5 using fixed point iteration method correct to 5 decimal places & explain the concept of Oscillatory divergence and monotone divergence.
20. Find the reciprocal of 3 using Newton Rapshon Method.
21. Find the root of upto 2 decimal places using bracketing method.
22. Find the square root of 7 using Newton Rapshon Method correct upto 4-deciaml digit.
23. Find a real root of correct upto 4 decimal places using false position method.
24. Find a real root of correct upto 4 decimal places using fixed point iteration method.
25. Find a real root of correct to six decimal places using fixed point iteration method.