	Parul University **Faculty of Engineering and Technology** **Parul Institute of Engineering and Technology** **Department: AI-ML/AI-RO/AI/AI-DS/CSE/MICRO/SAP/QUICK/ORACLE/IT/AERO**

Subject Name	**PROBABILITY, STATISTICS AND NUMERICAL METHODS**	**A.Y**	**2025/2026**
Subject Code	**303191251**	**Semester**	**4^{th}**

Chapter-4

Sr No	Question	COs	B.T
1	Use Bisection Method to solve $f(x)=x^3-2x-5$ in (1,3).	4	3
2	Use Regula Falsi Method to solve $f(x)=x^2-4x+3$.	4	4
3	Use Newton-Raphson Method to compute √6.	4	3
4	Solve $f(x)=\cos(x)-x$ using NR method near x=0.5.	4	4
5	Approximate a root of $f(x)=e^x-5x$ using Bisection.	4	2
6	Compare convergence of NR and Bisection for $f(x)=x-\cos(x)$.	4	5
7	Solve $f(x)=\ln(x)+x-3$ with Regula-Falsi.	4	4
8	Show graphically how Bisection guarantees a root.	4	2
9	Use NR method to find cube root of 10.	4	3
10	Explain failure cases of Newton–Raphson Method.	4	2