Veer Narmad South Gujarat University, Surat
Syllabus
For
B. Sc. Semester III
Effective from the Academic Year 2024-25

Paper: MDC-PH (TH) – 303 (2 Credits)
Course Title: Numerical Analysis

Unit I:

Introduction (2.1), the bisection method (2.2), the method of false position (2.3), the iteration method (2.4), Newton-Raphson method (2.5), Ramanujan's method (2.6).

Unit II:

Introduction (3.1), errors in polynomial interpolation (3.2), finite differences (3.3), forward differences (3.3.1), backward differences (3.3.2), central differences (3.3.3), symbolic relations and separation of symbols (3.3.4), detection of errors by use of difference tables (3.4), differences of a polynomial (3.5), Newton's formula for interpolation (3.6) Divided differences and their properties (3.10), Newton's general interpolation formula (3.10.1).

Reference books:

1. Introductory Methods of Numerical Analysis by S. S. Sastry, PHI publication, 4th Ed.
2. Numerical Analysis by G. Shanker Rao, New Age International Publication, 3rd Ed.