



Marking Scheme

End-Sem Examination, Winter 2025

Academic Year: 2025-2026	Semester: I
Class: PG-I	Program: MTech
Branch Code: CIV	Pattern: 2024
Name of Course: Numerical Methods	Course Code: 2404501

Q1] Root lies — (1m)
 x_1, x_2 — (1m)
 x_3, x_4 — (1m)
Matlab — (3m)

Q2] y_1, y_2, y_3 — (2m)
 y_4, y_5, y_6 — (2m)
 y_7 , all x — (2m)

Q3a] Values of y — (3m)
Formula — (2m)
 y — (1m)
Exact y — (1m)
Error — (1m)

Q3b] Values of y — (3m)
Formula — (2m)
 y — (1m)
Exact y — (1m)
Error — (1m)

Q3c] Values of y — (3m)
Formula — (2m)
 y — (1m)
Exact y — (1m)
Error — (1m)

Q3d] Table — (5)
Formula — (2m)
 y — (1m)

Q4a] Normalize equations — (1m)
Table: — (4m)
Simultaneous eqn — (2m)
Equation — (1m)

Q4b] Normalize equations — (1m)
Table: — (4m)
Simultaneous eqn — (2m)
Equation — (1m)

Q4c] Lagrange's formula — (2m)
Equation — (4m)
 y — (2m)

Q4d] Interpolation formula — (3m)
Equation — (3m)
 y — (2m)

Q5a] p — (1m)
Table — (1m)
Formula — (2m)
 f — (1m)

Q5b] p — (1m)
Table — (1m)
Formula — (2m)
 f — (1m)

Q5c] p — (1m)
Table — (1m)
Formula — (2m)
 f — (1m)

Q5d] p — (1m)
Table — (1m)
Formula — (2m)
 f — (1m)