Quiz

Here's a quiz based on the provided course outline, with a mix of MCQs, True/False, and Short Question

Section 1: Multiple Choice Questions (MCQs)

1. What is the primary concern in floating-point arithmetic?
a) Speed of calculation
b) Accuracy of results
c) Memory usage
d) Complexity of algorithms

Answer: b) Accuracy of results

2. Which method is used to find the roots of a nonlinear equation by repeatedly dividing the interval in hal
a) Bisection method
b) Regula-falsi method
c) Fixed point iteration method
d) Newton-Raphson method

Answer: a) Bisection method

3. What is the primary use of Lagrange interpolation?
a) Numerical differentiation
b) Numerical integration
c) Finding the roots of a polynomial
d) Approximating a function at a given point

Answer: d) Approximating a function at a given point

Section 2: True/False

1. The Newton-Raphson method is an indirect method for solving nonlinear equations. (False: It's an itera
2. The Jacobi method is used for solving systems of nonlinear equations. (False: It's used for solving syst
3. Central difference formulae are used for numerical differentiation. (True)

Section 3: Short Questions

1. What is the main difference between the forward and backward difference formulae in numerical differe

Answer: The forward difference formulae use the current and next point, while the backward difference fo

2. What is the advantage of the trapezoidal rule over the rectangular rule in numerical integration?

Answer: The trapezoidal rule is more accurate than the rectangular rule because it takes into account the

3. What is the purpose of the Gauss-Seidel method in solving systems of linear equations?

Answer: The Gauss-Seidel method is an iterative method used to find the solution of a system of linear e

I hope this quiz helps! Let me know if you need anything else.