**CS2008: Numerical Computing**

**Assignment No 2**

**Start Date: October 07; 2023**

**End Date: October 16; 2023**

**Total Marks: 100**

**Course Instructor: Prof. Dr. Mubashir Qayyum**

**Assigned Task:**

Evaluate the following integral

**1.** Using **Composite Trapezoidal Rule (T-Rule)** with , and **Composite Simpson Rule (S-Rule)** with .

**2.** How many subintervals will be required for accuracy, when the integral is approximated directly by T-Rule and S- Rule for which exact solution is ?

**3.** How many function evaluations will be required for the same accuracy, when the integral is approximated by Romberg base T-Rule and S-Rule.

**4.** Make comparisons and conclude in a paragraph (may be few lines).