



Sardar Beant Singh State University, Gurdaspur
Department of Chemical Engineering & Bio Technology

Tutorial Sheet No.1

Subject: Chemical Process Simulation

Q1. Differentiate the following mathematical solver with their limitation and advantages.

Ode45 (Runge-Kutta)

Ode 23(Runge-Kutta)

Ode 113(Adams)

Q2. Consider the simple heterogeneous first-order problem

$$\frac{dx}{dt} + 2x = 4.5$$

When $x(0) = 4$. Solve it Ode 45, Ode23 and Ode 113.