**Q) USE SIMULINK AND ODE TO SOLVE dy/dt=10Sin(t),y(0)=0 FOR 0<t<10.COMPARE THE RESULTS.**

**SOLN:**

**MATLAB CODE**

**%TIME SPAN**

**tspan = [0 10];**

**%CONDITION**

**y0 = 0;**

**[t,y] = ode45(@(t,y) 10\*sin(t), tspan, y0);**

**%PLOTTING THE GRAPH**

**plot(t,y);**

OUTPUT USING MATLAB

USING SIMULINK MODEL

**PLOT USING SIMULINK**

RESULT: SINCE THE TWO PLOTS ARE GIVING SAME PLOTS,HENCE RESULT IS VERIFIED USING MATLAB AND SIMULINK.