King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 301 – Term 172 – Quiz 5

Name:

Student ID #:

Section #:

Question 1. Solve the problem using seperation of variables

$$5\frac{\partial^2 u}{\partial x^2} = \frac{\partial u}{\partial t}, \quad 0 < x < \pi, \quad t > 0$$

$$u(0,t) = 0, \quad u(\pi,t) = 0, \quad t \geq 0$$

$$u(x,0) = x, \quad 0 < x < \pi$$