Department of Mathematics and Statistics (KFUPM)
Math-333 Semester-173 QUIZ IV

NAME: S.No. ID:
Maximum Marks: 10 Section:02 Time Allowed: 30 minutes

(1) Solve the boundary-value problem

$$k\frac{\partial^2 u}{\partial x^2} = \frac{\partial u}{\partial t}, 0 < x < L, t > 0$$

$$u(0,t) = 0, u(L,t) = 0, t > 0$$

$$u(x,0) = x^2 L, 0 < x < L.$$