

King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 333 – Term 181 – Quiz 4

Name:

Student ID #:

Section #: 1

Question 1. Find the Fourier series of

$$f(x) = \begin{cases} 0 & -\pi < x < 0 \\ e^x & 0 \leq x < \pi. \end{cases}$$

Question 2. Find the eigenvalues and the eigenfunctions of the Sturm-Liouville problem

$$y'' - 4y' + \lambda y = 0 \quad y(0) = 0 \quad y(1) = 0.$$