King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math-301   Semester-142   QUIZ IV

NAME: S.No.   ID:

Maximum Marks: 10   Section:06   Time Allowed: 35 minutes

(1) Let set of functions $\{\frac{1}{\sqrt{2}}, \ cos\frac{n\pi x}{2}\}$ be orthogonal on $[0, 2]$. Then find the norm of each function.

(2) Find the half-range Fourier cosine expansion of $f(x) = x^2 + x, \quad 0 \leq x < 1.$