King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 102   Quiz 2

Name : .... **ID** #............................. Serial #: .... Section#........

Question: Let

$$g(x) = \sin(\pi x) \int_{-\pi x}^{\pi x} \cos t \, dt.$$

1. Evaluate $g(\frac{1}{2})$.

2. Find $\frac{d}{dx} g(x)$ in the simplest form (evaluate any integral).