

King Fahd Univ. of Petroleum and Minerals  
Faculty of Sciences  
Department of Mathematical Sciences

QUIZ No. 3  
(MATH. 102-043 Sections 1 & 2)

**Name:**

**ID:**

**Prob. 1** Find

(a)  $\int \frac{xe^x}{(x+1)^2} dx$

(b)  $\int_0^2 \ln(x^2 + 1) dx$

**Prob.2** Compute

(a)  $\int \tan^5 x \sec^4 x dx$

(b)  $\int \cot^2 3x \sec 3x dx$

**Prob. 3**

(a) Find  $\int \frac{1}{x^2\sqrt{x^2+25}} dx$

(b) Find  $\int_1^2 \frac{dx}{\sqrt{4x-x^2}}$