King Fahd University of Petroleum & Minerals
Department of Mathematics and Statistics
(Semester 181) Math 101 Quiz # 2

Name: _____ I.D. # _____ Sr. # ___

1. Given $f(x)=\begin{cases} c\,x^2+2x & \text{if } x<2 \\ x^3-cx & \text{if } x\geq 2 \end{cases}$, find *c* such that $f(x)$ is continuous everywhere.
2. Find the horizontal asymptotes of $f(x)=\dfrac{2e^x}{e^x-5}$.
3. Using the definition, find the derivative of $f(x)=\dfrac{1}{x^2}$.