

**King Fahd University of Petroleum and Minerals**  
**Physics Department**  
**Phys-212: Modern Physics**  
**Spring 2002**

**Quiz # 4**

**Name:**

**ID#:** \_\_\_\_\_

A hydrogen atom is in the 3D state.

A . What are the possible values of the total angular momentum  $j$ ?

B .What are the possible values of the magnitude of the total angular momentum?

C . What are the possible z-components of the total angular momentum?