PHYS 101: General Physics 1 **KOÇ UNIVERSITY** **Spring Semester 2017**

College of Sciences

Section 1 **Quiz 6-1** **March 2017**

Closed book. No calculators are to be used for this quiz.

Quiz duration: 10 minutes

Name: **Student ID:** **Signature:**

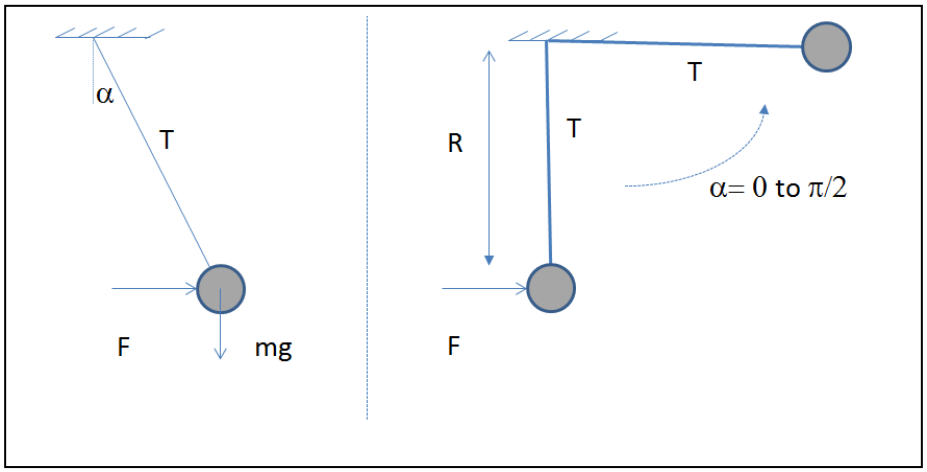
As seen in figure, **varying horizontal force F** is pushing the object very slowly from $\alpha = 0$ **to** $\pi/2$ and in a swing, it remains in equilibrium through the process.(velocity is negligible)

a) Calculate F as a function of angle α

b) What is the total work done by the force F

c) What is the total work done by the gravitational force (**mg**)

d) What is the total work done by the tension **T** in the rope



PHYS 101: General Physics 1 **KOÇ UNIVERSITY** **Spring Semester 2017**

College of Sciences

Section 2 **Quiz 6-2** **March 2017**

Closed book. No calculators are to be used for this quiz.

Quiz duration: 10 minutes

Name: **Student ID:** **Signature:**

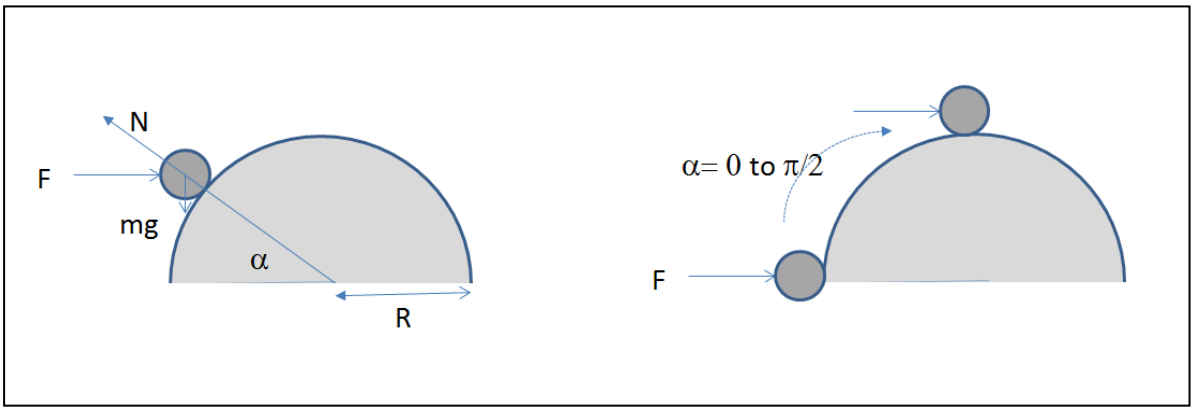
As seen in figure, **varying horizontal force F** is pushing the object very slowly from α **= 0 to** $\pi/2$ and it remains in equilibrium through the process.. (velocity is negligible)

a) Calculate F as a function of angle α

b) What is the total work done by the force **F**

c) What is the total work done by the gravitational force (**mg**)

d) What is the total work done by the normal force **N**



PHYS 101: General Physics 1 **KOÇ UNIVERSITY** **Spring Semester 2017**

College of Sciences

Section 3 **Quiz 6-3** **March 2017**

Closed book. No calculators are to be used for this quiz.

Quiz duration: 10 minutes

Name: **Student ID:** **Signature:**

As seen in figure, **varying horizontal force F** is pushing the object very slowly from α **= 0 to** $\pi/2$ and it remains in equilibrium through the process.(velocity is negligible).

a) Calculate F as a function of angle α

b) What is the total work done by the force **F**

c) What is the total work done by the gravitational force (**mg**)

d) What is the total work done by the normal force **N**