## EEE2035F Signals and Systems Quiz: 12 March 2007

## **Student Number:**

1. Consider the signal  $x(t) = A\cos(\omega_0 t + \theta)$  below:



- a. What is the period of the signal?
- b. What is the frequency of the signal in Hertz?
- c. What are the values of A,  $\omega_0$ , and  $\theta$ ?

2. Show by counterexample that the system below is nonlinear:



Is it causal? Is it time-invariant?