

Name: _____ Date & Time of Practical: _____.

Student Number: _____ Name of your TA1: _____.

Pre-Practical Question Sheet 8

Instructions: Please print this page, fill out brief answers to the questions below, and turn in the sheet to the box at the front when you arrive to Practicals this week. (Alternatively, you may write out the answers on a blank piece of paper. In this case, be sure to put your name, date & time of Practical at the top, and clearly number each question you are answering.)

1. What is the relationship between period and angular frequency?
2. A student writes $F = -kx$ for a spring of known spring constant. They measure the length of the spring (12 cm) and substitute this for x to find the force the spring exerts. But upon checking their measurement, the force is zero. What did they do wrong?
3. What is the potential energy stored in a spring?
4. At a turning point, a particle moving in a potential well changes direction. What percentage of the particle's total energy is potential energy, and what percentage is kinetic energy at a turning point?
5. Look at the following line of python code:

```
x = x + v*dt
```

Why doesn't this equation imply $v*dt = 0$? What does this code do?

Mark out of 2: