<u>The Future of Computer Technology – ICS3U</u>

Research the internet to answer the following questions.

1. Describe how some computer manufacturing companies are reducing the negative environmental impact of their computers.
   a. The introduction of sleep mode to prevent wasted electricity.
   b. Using renewable energy in data centers.
2. What is the **Open Intellectual Property Movement**?
   a. The open intellectual property movement is the movement for open source software and standards to open-access publishing
3. What is a positive and negative feature of this movement
   a. Positive:Free stuff
      i.
   b. Negative;0
4. What is the one major advantage of **Quantum Computing** in comparison to the computing technologies of today
   a. Quantum computing is much more faster and much more complex compared to the computing technologies today
5. What is the basic unit of memory in a Quantum Computer?
   a. The basic unit is called a quantum bit or know as the qubit
6. What is **Nanotechnology**?
   a. Nanotechnology is the study of small things at the nanoscale. This can be engineering, mathematics, biology, physics, or chemistry
7. How does **Phototonics** help in the transfer of data and the speed of the internet
   a. Photonics is able to transfer data through the manipulation of light science.
8. What is **Cloud Computing**?
   a. Cloud computing is the online access of computer applications through the use of physical computer servers and data centers.
9. Describe how **a Natural User Interface** would improve the way we use a computer.
   a. Natural User Interface is a human computer that refers to sensory inputs such as touch, speech, and gesture. The NUI would improve the way we use computers with human-like interactions that feel natural rather than a computer software.
10. What is **Machine Language and Intelligent Systems**? What is a concern of this?
    a. Intelligent systems are advanced machines that respond to the world around them. An example of this would be a roomba.
    b. Machine learning are complex algorithms that automatically improves as it gains more experience.
    c. Despite both being very innovative their has already been backlash towards machine learning and intelligent systems. For example, Google algorithms can learn about very sensitive information about ourselves and use that for ads or news recommendations.
    d. Furthermore, these systems have become so advanced that they have began overtaking human jobs.
11. How might **Bioinfomatics** lead to positive change in the medical field?

a. Bioinformatics is a mix of biology and computer science, it has the potential to discover brand new antibiotics or discover sustainable agriculture and energy.
12. Give examples of where a **Medical Robot** is being used today.
    a. In therapeutic facilities with massaging,
    b.