Lab 3 Protists and Fungi Quiz

1. Are Protists a monophyletic group? (1pt)

No protists are not a monophyletic group.

2. Using a microscope with a 10x eye piece and a 5x focal lens, what magnification will you see the object in the microscope? (1pt)

$10 \times 5 = 50x$

3. Give an example of a protist that is harmful to humans or animals, state how it is harmful, and list what taxonomic group it belongs too. (1pt)

You could have given a number of examples for this question. Below are some examples:

- Chromalveolata: Oomycetes, These contain important plant pathogens such as potato late blight and sudden oak death.
- Chromalveolata: Apicomplexans are an important group because they contain the parasite *Plasmodium* (malaria)
- Excavata: Diplomonads include the gastrointestinal parasite *Giardia*.
- Excavata: Euglenozoans include the parasites
  - *Leishmania*
  - *Trypanosoma brucei*: african sleeping sickness.
- Unikonata: Amoezoans: Entamoebas, which include the causes of amebic dysentery

4. Explain secondary endosymbiosis. (1pt)

Secondary endosymbiosis is the formation of a symbiotic relation of a eukaryotic cell living within another eukaryotic cell.

5. What material strengthens fungal cell walls? (1pt)

Fungal cell walls are made of chitin. This is the same material used in the exoskeletons of arthropods.
6. List and describe 3 ways that different protists use to move, and explain each of them. (2 pts)

- Flagella: Flagella are whiplike structures that are used for movement.
- Cilia: Cilia are small hairlike structures used for movement. An example of an organism that uses cilia to move is a paramecium.
- Pseudopod: A pseudopod or false foot is a structure that a single celled organism extends than flows into in order to move.

7. What is plasmogamy? (1pt)

Plasmogamy occurs in the sexual lifecycle of a fungus, when the cytoplasm of two cells form, but the nuclei do not fuse. This leads to a heterokaryotic state.

8. What is an autotroph? (1pt)

An autotroph is an organism that produces its own food.

9. What is karyogamy? (1 pt)

Karyogamy occurs in the lifecycle of a fungus when the haploid nuclei in a heterokaryotic cell fuse to form a diploid nuclei.