**Unit One Test**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part One – Matching**

Match the definition with the cell organelle in the space provided. (1 mark each)

\_\_\_\_1. Nucleus A. A thick, rigid membrane that surround the cell and provides support for the structure.

\_\_\_\_2. Ribosomes B. The cells control centre. It contains the DNA or hereditary information.

\_\_\_\_3. Endoplasmic Reticulum C. A plastid that contains chlorophyll used in the process of photosynthesis.

\_\_\_\_4. Cell wall D. Organelles in which proteins are synthesized.

\_\_\_\_5. Mitochondria E. The series of canals that carry materials throughout the cytoplasm.

\_\_\_\_6. Chloroplasts F. Sac like structures that contain digestive enzymes which break down molecules that enter the cell.

\_\_\_\_7. Lysosomes G. The power plant of the cell. They change food into energy for the cell.

**Part 2 – Short Answer**

Answer in the space provided.

1. What is Biology? (1 mark)
2. True or false: The cell is the basic unit of all living matter. (1 mark)
3. True or false: Cells are not the smallest living things. (1 mark)
4. True or false: All cells come from preexisting cells. (1 mark)
5. List 3 of the 7 characteristics of life. (3 marks)
6. List 2 differences between plant and animal cells. (2 marks)
7. The diameter of the field of view in a light microscope on low power (4x) is 4.1 mm. What will be the field of view for medium power (10x) and high power (40x)? Show your work. (4 marks)
8. What are the four mechanisms of change in evolutionary theory?  
   (4 marks)
9. Define evolution. (2 marks)
10. Joe and Fred are the same age. Joe has been married 3 times and has 2 children with each wife. Fred has one wife, has 3 children and 2 grand children. Who is more ***fit***? (1 mark) Why? (1 mark)
11. What is continental drift and how did it affect evolution? (3 marks)
12. What is genetic drift? (2 marks)
13. What is natural selection? (3 marks)
14. What are the differences between gradualism and punctuated equilibrium? (3 marks)
15. What is comparative anatomy and comparative embryology? (2 marks)
16. The blue moth lives in a forest where the blue bark oak grows. The blue moth is camouflaged by the bark of the blue bark oak from predators. There are a few mutant moths who are brown. 17 factories are built near the forest that turn the blue bark oaks brown in colour. The mutant moths now have an advantageous trait. What has taken place: natural selection or genetic drift? What else has taken place: Gradualism or punctuated equilibrium? (2 marks)
17. True or false: in sexual selection women compete and males choose
18. List the 3 of the 7 steps of non repulsion. (3 marks)
19. What is a bottleneck? Is it a form of genetic drift or natural selection?  
    (1 mark)
20. What is Founder effects? (2 marks) Is it a form of genetic drift or natural selection? (1 mark)
21. Frank drops a bottle of perfume on the stage of a theatre. The people in the front row smell it first. The people in the back row smell it last. This process is known as osmosis, diffusion or active transport. (1 mark)
22. What role did climate change play in evolution? (2 marks)
23. Give three examples of an “ology” and how each ology can benefit Canadian Society. (6 marks)
24. Discuss natural selection on individuals, populations and species
25. Describe how to prepare a wet mount slide.