AICE Biology - Chapter 1 Test Study Guide

Your test will be an application of your knowledge. You must know the structure and function of organelles, but you will rarely be asked questions a straight forward manner.

1. Be able to recognize and define the following terms:

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| --- | --- | --- | --- | --- |
| Cell theory | Partially permeable | Freely permeable | Light microscope | Scanning electron microscope |
| Cytology | Cell surface membrane | Nucleus | Chromatin | Transmission electron microscope |
| DNA | Nucleolus | Cytoplasm | Organelles | Mitochondria |
| Golgi apparatus | Centriole | Cell wall | Plasmodesmata | Vacuole |
| Tonoplast | Chloroplast | Magnification | Resolution | Photomicrograph |
| Electron micrograph | Endoplasmic reticulum | Ultrastructure | Nuclear envelope | Nuclear pores |
| Ribosome | Lysosome | Microvilli | Eukaryote | Prokaryote |
| Tissue | Organ | System | Mesophyll | Stomata |
| Xylem | Phloem | Sieve tubules |

1. Be able to describe and interpret drawings and photographs of typical animal and plant cells as seen using the light microscope and make microscopical measurements using an eyepiece graticule and stage micrometer (?????????? May have to wait for microscopes)
2. Be familiar with the unit used in cell studies (for this test, exponents will be provided for measurement units)
3. Be able to recognize organelles in drawing and photographs, and identify their function
4. Compare the structure of typical animal and plant cells
5. Calculate the linear magnification of, and the actual sizes of, specimens from drawings and photographs
6. Describe the structure of a prokaryotic cell and contrast the structure of prokaryotic cells with that of eukaryotic cells (Table 1.2 page 21)
7. Explain how eukaryotic cells may be organized into tissues and organ, with reference to transverse sections of stems, roots, and leaves (pages 20-24)
8. Draw and label low power plan diagrams of tissues and organs (study the figures on page 22-23)

10) Review all pictures in the textbook.