

Name:

Period:

Date:

Living Environment

Homework # 1.9

Carbohydrates

1. Why are sugars biologically important?
2. Describe the process of dehydration synthesis.
3. What is the empirical formula for monosaccharides?
4. What type of compound is formed when two monosaccharides are joined by dehydration synthesis?
5. What is a polysaccharide?

6. A type of organic compound made up of carbon, hydrogen and oxygen in which the ratio of hydrogen to oxygen is two is to one.
7. What is the simplest form of carbohydrates?
8. Which substances are made up of hundreds of repeating glucose units bonded together?
a. starches b. proteins c. nucleic acids d. lipids
9. Starches in animals are stored in a polysaccharide form known as _____.
10. Which chemical formula represents a carbohydrate?

Name: _____

The diagram below represents the measurement of a biological specimen.

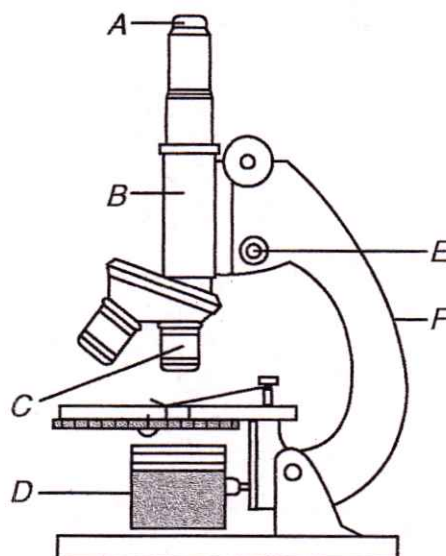


What is the approximate length of the specimen in millimeters?

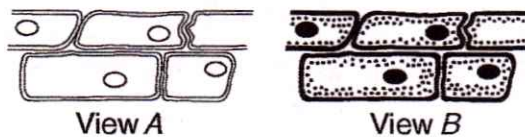
- A) 30 mm C) 35 mm
 B) 25 mm D) 40 mm
- 2) A wet-mount slide preparation of a specimen is stained in order to
- A) eliminate some organelles
 B) use the high-power lens
 C) make cell structures more visible
 D) remove water from the slide
- 3) When using a compound light microscope, the *most* common reason for staining a specimen being observed is to
- A) make the view more colorful
 B) keep the organism from moving around
 C) determine the effects of chemicals on the organism
 D) reveal details that are otherwise not easily seen
- 4) One characteristic of *all* living things is that they
- A) maintain internal stability
 B) develop organ systems
 C) produce identical offspring
 D) synthesize only inorganic matter
- 5) The ability to grow in size is a characteristic of living organisms. Although an icicle may grow in size over time, it is considered nonliving because there is
- A) an interaction between the icicle and the environment
 B) no metabolic activity present
 C) an increase in matter, but no increase in the number of icicles
 D) no way for the icicle to move away from heat

9. Why do we need to stain cells?

Questions 6 and 7 refer to the following:



- 6) Information about which *two* lettered parts is needed in order to determine the total magnification of an object viewed with the given microscope in the position shown?
- 7) Which lettered part on the given microscope image should be used to focus the image while using high power?
- 8) A student observes some cells with a compound light microscope as shown in view A below.



What did the student most likely do to obtain view B?

- A) used a higher magnification
 B) applied a biological stain to the slide
 C) used electrophoresis
 D) applied distilled water to the slide

10. Why do we need to lower the coverslip at an angle to cover the specimen?

