

Circle the best single letter choice for each of the following questions before transferring your answers to your computer sheet.

1. Which of the following is **not** found in or on a prokaryotic cell?

- A. DNA.
- B. ribosomes.
- C. pili.
- ☒ D. lysosomes.
- E. nucleoid.

2. Which of the following is **not** part of the endomembrane system?

- ☒ A. mitochondria
- B. Golgi apparatus
- C. rough endoplasmic reticulum
- D. lysosomes
- E. tonoplast

3. Which organelle is involved in the energy production of a prokaryotic cell?

- A. chloroplast
- ☒ B. mitochondrion
- C. nucleus
- D. cilia
- E. The entire cell is involved in energy production.

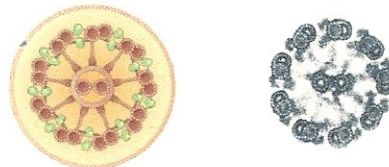
4. An animal secretory cell and a photosynthetic leaf cell are similar in all of the following ways **except**

- A. They both have a Golgi apparatus.
- ☒ B. They both have mitochondria.
- C. They both have a plasma membrane.
- D. They both have a nucleolus.
- E. They both have chloroplasts.

5. Biologists can isolate and purify ribosomes from mammalian cells by the use of the

- A. transmission electron microscope.
- B. scanning electron microscope.
- ☒ C. ultracentrifuge.
- D. light microscope.
- E. Golgi apparatus.

6. The following diagram and electron micrograph show



- ☒ A. the cross section through a flagella.
- B. a nuclear pore.
- C. the cross section through a mitochondria.
- D. sister chromatids in crossover.
- E. the cross section of a bacterial cell.

7. Cytokinesis usually, but not always, follows mitosis. If a cell completed mitosis but not cytokinesis, this would result in a cell with

- A. a single large nucleus.
- B. a high concentration of actin and tubulin.
- C. one abnormally large nucleus and one abnormally small nucleus.
- ☒ D. two nuclei.
- E. two nuclei but with half the amount of DNA.

8. The centromere is a region in which

- A. chromatids are attached to one another.
- B. metaphase chromosomes become aligned.
- C. chromosomes are grouped during telophase.
- D. the nucleus is located prior to mitosis.
- ☒ E. new spindle microtubules form.

9. Replication of DNA occurs during

- ☒ A. S phase.
- B. G₁ phase.
- C. G₀ phase.
- D. prophase.
- E. cytokinesis.