

SECTION 24-1 REVIEW

VIRAL STRUCTURE AND REPLICATION

VOCABULARY REVIEW Define the following terms.

1. virus _____

2. capsid _____

3. retrovirus _____

4. lytic cycle _____

5. lysogenic cycle _____

MULTIPLE CHOICE Write the correct letter in the blank.

- ____ 1. Viruses are not alive because they
 - a. do not grow.
 - b. lack cell parts.
 - c. do not metabolize.
 - d. All of the above
- ____ 2. Viruses can reproduce
 - a. independently of host cells.
 - b. independently of host cells if they first take up organelles from the host cells.
 - c. only within host cells.
 - d. only with the assistance of other viruses.
- ____ 3. The enzyme reverse transcriptase uses
 - a. DNA as a template to make more DNA.
 - b. DNA as a template to make RNA.
 - c. RNA as a template to make more RNA.
 - d. RNA as a template to make DNA.
- ____ 4. The grouping of viruses is based partly on the
 - a. presence or absence of an envelope.
 - b. presence or absence of nucleic acid.
 - c. type of organism they infect.
 - d. structure of their organelles.
- ____ 5. Phage DNA that is integrated into a host cell's chromosome is a
 - a. coronavirus.
 - b. retrovirus.
 - c. prophage.
 - d. capsid.

SHORT ANSWER Answer the questions in the space provided.

1. What did Wendell Stanley's work suggest about the nature of viruses? _____
-
- _____
-
- _____

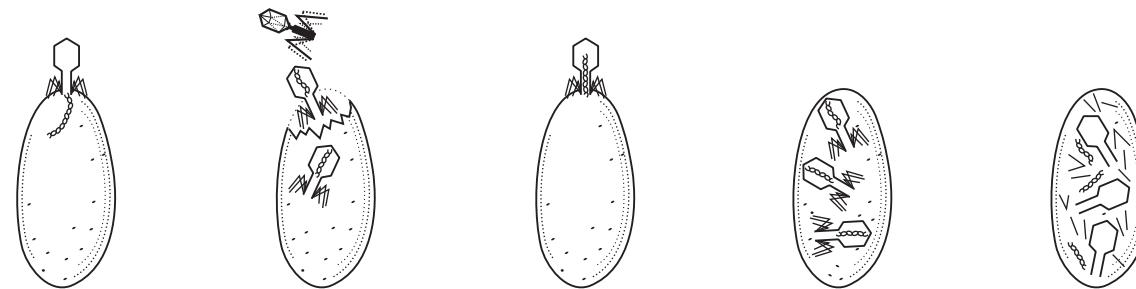
2. What kinds of factors can cause a prophage to become virulent? _____
-
- _____
-
- _____

3. How does an RNA virus get viral DNA into a host cell's genome? _____
-
- _____
-
- _____

4. Why must a person receive a different flu vaccine each year to be protected against the flu? _____
-
- _____
-
- _____

- 5.
- Critical Thinking**
- How does the structure and function of bacteriophages make these viruses

useful tools for genetic engineering? _____

_____**STRUCTURES AND FUNCTIONS** The diagrams below represent five steps in the lytic cycle of a bacteriophage. The order of the steps has been scrambled. Arrange the steps in their correct order by writing the letter of each step, and briefly describe what is happening in each step.

a _____

b _____

c _____

d _____

e _____