SELF-TESTS

In the matching section, there is only one answer to each question; however, the lettered options (a, b, c, etc.) may be used more than once or not at all.

I. Matching

___ 1. A complete, assembled virus.

___ 2. The subunits making up the protein outer coating of most viruses.

___ 3. The protein outer coating of most viruses.

___ 4. A term derived from the word for poison.

___ 5. A combination of lipids, proteins, and carbohydrates covering the protein coating of a virus.

___ 6. Infectious prion.

a. Virion

b. Capsid

c. Capsomere

d. Envelope

e. Virus

f. PrP^{C}

g. PrP^{Sc}

II. Matching

___ 1. Describes the morphology of the capsid of many viruses.

___ 2. A method by which a virus enters an animal host cell.

___ 3. A cell line derived from tissue that normally reproduces for relatively few generations.

___ 4. The HeLa cell line would be placed in this group.

___ 5. A clearing in a "lawn" of susceptible bacterial cells.

___ 6. The number of bacteriophages produced by one bacterial host cell.

___ 7. Presumed agent causing diseases such as sheep scrapie.

___ 8. A bacterial virus.

___ 9. A short strand of RNA virus without a capsid.

___ 10. PrP.

a. Burst size

b. Burst time

c. Primary cell line

d. Continuous cell line

e. Plaque

f. Cytopathic effect

g. Icosahedral

h. Endocytosis

i. Phage

j. Viroid

k. Diploid cell line

l. Prion

III. Matching

___ 1. Describes a method by which an enveloped virus leaves the host cell while acquiring the envelope.

___ 2. Describes growth characteristics of normal cell cultures in glass or plastic containers.

___ 3. A term meaning cancer-causing.

___ 4. Observable changes in a virus-infected cell.

___ 5. The time during which the capsids and DNA of a phage, already formed, are now assembled into complete viruses.

a. Replicative form

b. Maturation period

c. Budding

d. Oncogenic

e. Cytopathic effect

f. Endocytosis

g. Monolayer

h. Eclipse period

IV. Matching

___ 1. Cancer of connective tissue.

___ 2. The clumping of red blood cells due to adherence to spikes on viruses.

___ 3. Equivalent to mRNA in a single-stranded RNA virus.

___ 4. RNA to DNA.

a. Sarcoma

b. + or sense strand

c. Reverse transcription

d. Interferon

e. Hemagglutination

V. Matching

___ 1. Varicella virus.

___ 2. Herpes simplex 2.

___ 3. Epstein-Barr virus.

___ 4. Cytomegalovirus.

___ 5. Cause of Kaposi's sarcoma.

a. Human herpesvirus 3

b. Human herpesvirus 4

c. Human herpesvirus 5

d. Human herpesvirus 8

e. Human herpesvirus 2

Fill in the Blanks

1. The virus, once inside the host cell, separates the viral nucleic acid from the capsid; this is called _____.
2. Another term for a lysogenic phage is _____ phage.
3. _____ are not solid tumors but an excessive production of white blood cells.
4. Many viruses can be grown in _____ eggs.
5. The herpes simplex virus remains _____ in nerve cells of the host for long periods without causing disease.
6. Counts of phage are made in terms of _____ units.
7. An oncogene might become active when placed on the chromosome in a position where normal controls are not active; this is termed _____.
8. The term _____ refers to the spectrum of host cells the virus can infect.
9. When cells multiply in an uncontrolled way, the excess tissue is called a _____.
10. Oncogenic viruses are those that _____ cells into tumor cells.
11. The type of virus implicated as a cause of AIDS is a _____.
12. The abbreviation TSTA stands for tumor-specific _____ antigens.
13. For several minutes following infection by a phage, no complete phages can be found in the host cell; this is called the _____ period.
14. The _____ of the phage is adsorbed to the host cell.
15. The phage forms a hole in the cell wall using phage _____ and drives the tail core through the cell wall.
16. Sometimes the lytic cycle does not occur upon phage infection of a host bacterium. The phage DNA becomes incorporated as a _____ into the host's DNA.
17. When the phage DNA is incorporated into the host's DNA, this state is called _____.
18. Transformed cells lose _____ ; that is, they do not stop reproduction when in contact with neighbor cells.
19. The hepadnavirus has genetic material called _____ NA.
20. Picornaviruses have genetic material called _____ NA.
21. Tumors are malignant when cancerous and _____ when not cancerous.

Critical Thinking

1. What feature of the viral life cycle makes it difficult to produce antiviral drugs?

2. How are viruses able to avoid the action of antibodies?

3. Compare and contrast the lytic and lysogenic cycles of the T-even bacteriophages.

4. By what mechanism may retroviruses induce tumors?

5. During 1993, several deaths caused by a virus occurred in the southwestern United States. Eventually, other cases surfaced in other parts of the country. What method was used to isolate the viral agent? What genus of virus caused the outbreak?