

Homework Reading Sheet Unit 2-3  
**Viruses and Bacteria** (p. 122-139)

1. What is the capsid of a virus?  
 A. Nucleic acid                      C. Protein coat  
 B. Enzyme                              D. Provirus

Which of the following statements about viruses is/are true?

2. Viruses carry on cellular respiration.                      A. True                      B. False  
 3. Viruses are able to reproduce..                      A. True                      B. False  
 4. All viruses have a capsid and nucleic acid.                      A. True                      B. False  
 5. All viruses have DNA.                      A. True                      B. False
6. What type of cell does a T4 virus attack?  
 A. Bacterium      B. liver cell      C. T-cell                      D. Blood cell

Match the disease with the virus that causes it.

7. Cold sores	A. HIV
8. Acquired Immune Deficiency Syndrome	B. H1N1
9. Swine Flu	C. Herpes simplex

For numbers 10-13, state whether each of the following describes:

- A. Lytic cycle                      C. Both lytic and lysogenic cycles  
 B. Lysogenic cycle                      D. Neither lytic nor lysogenic cycles
10. Virus injects its DNA into the host cell.  
 11. Viral DNA becomes a provirus.  
 12. Virus destroys the host cell.  
 13. Virus engulfs the host cell.
14. How is a retrovirus different from other viruses?  
 A. Contains RNA, not DNA                      C. Can reproduce on its own  
 B. Has a lytic cycle only                      D. Has DNA, not RNA
15. Retroviruses have a higher mutation rate than other viruses.    A. True    B. False
16. What are pathogenic bacteria?  
 A. Decomposers                      C. Disease-causing  
 B. Nitrogen-fixing                      D. Used to make yogurt
17. Why are bacteria difficult to classify into species?  
 A. They are not genetically separated from each other.  
 B. They reproduce mainly by asexual methods  
 C. They mutate rapidly  
 D. All of the above

18. Bacteria are classified mainly by  
A. Shape                      B. Size                      C. Color                      D. Nutrition
19. Which type of bacteria have rod-shaped cells arranged in chains?  
A. Streptococcul                      C. Staphylococcus  
B. Streptobacillus                      D. Diplobacillus
20. What substance is found in the cell walls of bacteria?  
A. Cellulose                      B. Peptidoglycan                      C. Hemoglobin
21. All bacteria are heterotrophic.                      A. True                      B. False
22. All bacteria are prokaryotic.                      A. True                      B. False
23. Which method of reproduction is most common in bacteria?  
A. Asexual, by conjugation                      C. Sexual, by conjugation  
B. Asexual, by binary fission                      D. Sexual, by binary fission
24. The tube through which bacteria exchange chromosome material during conjugation is the  
A. Funnel                      B. Pilus                      C. Capsid                      D. Plasmid
25. What part of a bacterium is normally used in genetic engineering?  
A. Plasmid                      B. Cell wall                      C. Cell membrane                      D. Flagellum
26. Some bacteria can survive in extreme conditions by forming pollen.                      A. True                      B. False
27. The bacterium *Clostridium botulinum* causes  
A. Tuberculosis                      B. Syphilis                      C. Food poisoning
28. Bacteria may become resistant to antibiotics because  
A. They mutate easily  
B. They reproduce rapidly  
C. Extar genes may be transmitted between bacterial cells  
D. All of the above
29. Why are cyanobacteria important to many ecosystems?  
A. They produce oxygen                      C. They are decomposers  
B. They are producers in food chains                      D. Both A and B
30. How are archaebacteria different from other bacteria?  
A. Cell walls do not contain peptidoglycan  
B. They are much larger  
C. They have a different means of reproduction  
D. They are multicellular
31. What type of bacteria would be found in hot sulfur springs?  
A. Methanogens                      B. Halophiles                      C. Thermoacidophiles