

Name \_\_\_\_\_

Read Chapter 10 from mutations through prions and answer the questions below.  
Due Thursday, Nov1, in class, or complete the online version (10 points max).

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

- 1) The RNA that is translated into a polypeptide is \_\_\_\_\_ RNA. 1) \_\_\_\_\_  
A) transfer B) viral C) messenger D) ribosomal
- 2) A mutation within a gene that will insert a premature stop codon in mRNA would \_\_\_\_\_. 2) \_\_\_\_\_  
A) change the location at which transcription of the next gene begins  
B) have the same effect as deleting a single nucleotide in the gene  
C) result in a shortened polypeptide chain  
D) result in a longer polypeptide chain
- 3) What is the smallest number of nucleotides that must be added or subtracted to change the triplet grouping of the genetic message? 3) \_\_\_\_\_  
A) one B) two C) three D) four
- 4) What is the ultimate source of all diversity? 4) \_\_\_\_\_  
A) natural selection B) meiosis  
C) mutation D) sexual recombination
- 5) Mad cow disease is caused by 5) \_\_\_\_\_  
A) an enveloped virus.  
B) infectious proteins called prions.  
C) small circular RNA molecules called viroids.  
D) a retrovirus similar to HIV.
- 6) As an experiment, you infect bacteria with an unknown virus to see how the bacteriophage affects the bacteria. After a few days, you notice that the bacterial population is growing normally and that the cells appear healthy. Assuming that the infection occurred, what can you conclude from your observations? 6) \_\_\_\_\_  
A) The virus is a retrovirus that is reproducing the lysogenic cycle.  
B) The virus is a retrovirus that is reproducing the lytic cycle.  
C) The virus is a bacteriophage that is reproducing the lysogenic cycle.  
D) The virus is a bacteriophage that is reproducing the lytic cycle.
- 7) Plant viruses \_\_\_\_\_. 7) \_\_\_\_\_  
A) do not exist, as viruses attack only animals  
B) often use RNA, rather than DNA, as their genetic material  
C) cause diseases that can be easily cured  
D) benefit plants, rather than causing disease
- 8) A(n) \_\_\_\_\_ is to bacteria as a \_\_\_\_\_ is to animal cells. 8) \_\_\_\_\_  
A) RNA virus... DNA virus B) prophage... provirus  
C) phage... prophage D) retrovirus... virus

9) HIV (human immunodeficiency virus) must use its own \_\_\_\_\_ to reproduce.

A) RNA polymerase

B) tRNA

C) DNA polymerase

D) reverse transcriptase

9) \_\_\_\_\_

10) Which of the following would NOT likely develop as an emerging virus?

A) a virus that begins to infect people in New York City, a popular tourist destination

B) A virus that is normally harmless to humans undergoes rapid mutations.

C) a virus that affects primarily rabbits mutates and infects humans

D) a virus harmful to humans that changes very slowly over time

10) \_\_\_\_\_