Chapter 8 practice questions:

1. Genetic changes in bacterial genomes occur through what two methods?

a) Mutations and DNA replication

b) Vertical gene transfer and Protein synthesis

c) Mutations and Horizontal gene transfer

d) None of the above

2. Horizontal gene transfer occurs:

a) When a spontaneous mutation occurs in a bacterial genome

b) When genetic information is passed from one living cell to another of the same generation

c) When a plasmid is transferred from one living cell to another of the same generation

d) When a missense mutation

3. True or False. A missense mutation results when a single nucleotide is replaced by another in the DNA sequence of a gene.

4. True or False: Transduction is an example of Vertical gene transfer.

a) True

b) False

5. When a premature stop codon results due to a spontaneous mutation in the genetic code of bacterial DNA the protein will be:

a) Completely functional

b) Incomplete and non-functional

c) Incomplete but still functional

d) none of the above

6. F-plasmids are:

a) DNA molecules required for antibiotic resistance

b) genes that have little function

c) DNA molecules required for conjugation

d) DNA molecules required for virulence factors

e) all of the above

7. Bacteria become infected with a bacteriophage virus. The virus replicates and accidently incorporates pieces of bacterial DNA into some phages, allowing them to pass on bacterial DNA to other cells. This is best described as:

a) DNA replication

b) Transformation

c) Transduction

d) Conjugation

8. True or False: When extra pieces of DNA (released from dead bacterial cells) are taken up by other bacteria the DNA recombines into the genome. The recombined piece of DNA becomes a stable genetic element in the bacterial genome and is passed onto progeny.

a) True

b) False