

Chapter 10, 11, 12, 13, 14 Study Guide

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- _____ 1. RNA differs from DNA in that RNA
 a. is single-stranded. c. contains the nitrogen base uracil.
 b. contains a different sugar molecule. d. All of the above
- _____ 2. Which of the following is *not* found in DNA?
 a. adenine c. uracil
 b. cytosine d. all of the above
- _____ 3. In RNA molecules, adenine is complementary to
 a. cytosine. c. thymine.
 b. guanine. d. uracil.
- _____ 4. During transcription, the genetic information for making a protein is "rewritten" as a molecule of
 a. messenger RNA. c. transfer RNA.
 b. ribosomal RNA. d. translation RNA.

mRNA: CUCAAGUGCUUC

Genetic Code:

	U	C	A	G	
U	Phe	Ser	Tyr	Cys	U
	Phe	Ser	Tyr	Cys	C
	Leu	Ser	stop	stop	A
	Leu	Ser	stop	Trp	G
C	Leu	Pro	His	Arg	U
	Leu	Pro	His	Arg	C
	Leu	Pro	Gln	Arg	A
	Leu	Pro	Gln	Arg	G
A	Ile	Thr	Asn	Ser	U
	Ile	Thr	Asn	Ser	C
	Ile	Thr	Lys	Arg	A
	Met	Thr	Lys	Arg	G
G	Val	Ala	Asp	Gly	U
	Val	Ala	Asp	Gly	C
	Val	Ala	Glu	Gly	A
	Val	Ala	Glu	Gly	G

- _____ 5. Refer to the illustration above. What is the portion of the protein molecule coded for by the piece of mRNA given?
 a. Ser—Tyr—Arg—Gly c. Leu—Lys—Cys—Phe
 b. Val—Asp—Pro—His d. Pro—Glu—Leu—Val
- _____ 6. Refer to the illustration above. The anticodons for the codons in the mRNA given are
 a. GAG—UUC—ACG—AAG. c. CUC—GAA—CGU—CUU.
 b. GAG—TTC—ACG—AAG. d. CUU—CGU—GAA—CUC.
- _____ 7. Refer to the illustration above. Which of the following would represent the strand of DNA from which the mRNA strand given was made?
 a. CUCAAGUGCUUC c. GAGTTCACGAAG
 b. GAGUUCACGAAG d. AGACCTGTAGGA
- _____ 8. A strand of DNA formed by the splicing of DNA from two different species is called