

## Chapter 5

## The Cell Cycle and Protein Synthesis

## Section 5B Quiz

- <sup>A</sup>  
p. 102 1. In DNA, adenine pairs with  
A. thymine. C. cytosine.  
B. uracil. D. guanine.
- <sup>B</sup>  
p. 104 2. A codon codes for a(n)  
A. mRNA. C. nucleotide.  
B. amino acid. D. nucleic acid.
- <sup>A</sup>  
p. 104 3. DNA's code is copied onto \_\_\_\_\_ RNA, which carries the code to the ribosomes in the cytoplasm to make a protein.  
A. messenger C. transfer  
B. translation D. synthesis
- <sup>D</sup>  
p. 104 4. Which of these could be a codon?  
A. AGCA C. CT *(A codon consists of three bases, so choices A and C are incorrect. A codon is a group of three bases in RNA, and thymine is found only in DNA, so choice B is also incorrect.)*  
B. ATA D. GUA
- <sup>True</sup>  
p. 102 5. (True or False) The order of nucleotides in DNA contains the instructions for making proteins.
- <sup>True</sup>  
facet, p. 106 6. (True or False) Sickle cell anemia is caused by a mutation that results in the production of abnormal hemoglobin.
- <sup>False</sup>  
p. 104 7. (True or False) The process of forming RNA from DNA is called translation.
8. A nucleotide consists of what three parts?  
      
*a sugar, a phosphate, and a base p. 102*
9. Who were the two scientists who created the currently accepted model for DNA?  
      
*Watson and Crick p. 102*
10. List one structural difference between DNA and RNA.  
      
*Any one of these three is acceptable: (1) RNA usually has only a single chain of nucleotides. (2) In RNA, the base thymine is replaced by uracil. (3) The sugar in RNA is different from the sugar in DNA. p. 103*