Answers to Assigned Odd-Numbered Text Problems for Section 5

1.21 The complement of the transcript sequence, written as DNA (T instead of U) is ATCGGATG. This corresponds to the DNA sequence starting at the 10\textsuperscript{th} bp, counting from the left. So the transcript sequence is the complement of that sequence: UAGCUACGACUUGGA.

1.23 UUU is a codon for Phe.

1.25 There are 3 possible reading frames (reading can start with base 1 (or 4 or 7 ...), or base 2 (or 5 or 8 ...), or base 3 (or 6 or 9 ...). \textit{In vitro} translation can start with any of these. But \textit{in vivo} translation always starts with an AUG, which in this case starts with the 11\textsuperscript{th} base.

1.29 The mutation can be a synonymous mutation, changing one codon for another that codes for the same amino acid.