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REVIEW QUESTIONS

1. Discuss the basic features of DNA replication.
2. Compare and contrast DNA and RNA.
3. Describe the differences and similarities between prokaryotic and eukaryotic structural genes.
4. Describe the elongation phase of translation.
5. Deduce the most likely DNA coding sequence for the following human protein: MAGGTWYQLFPRKMWNDSTLHPFILPMNVAG.
6. Determine the amino acid sequence encoded by the following mRNA: GCGAUCGACGAUGUUUCUAAAAGUAUCUCAUCGAAAUGAGGGUUCGUAAUAGCGACC CGGGCGG.
7. What is an operon? What is the biological significance of an operon?
8. How is transcription initiation controlled in bacterial cells?
9. Describe the major DNA elements that are responsible for the transcription of eukaryotic structural genes.
10. How are proteins transported across the cytoplasmic membrane of gram-positive bacterial cells?
11. Describe the type II secretion system of gram-negative bacterial cells.
12. How are secretory proteins processed in eukaryotic cells?