

DNA, RNA and Protein Synthesis Test Review

Answer the following questions on a separate piece of paper in complete sentences.

1. Describe the structure of DNA. What are the monomers and what are they composed of?
2. What are the base pairing (or Chargaff's) rules? What kind of bond holds the bases together?
3. What is replication and how are the enzymes DNA polymerase involved?
4. Given the following DNA strand, what is its complement (the other half)?
5. GCCTATCAATCG
6. What are the three main ways RNA is different from DNA?
7. What is transcription and where does it occur?
8. What is RNA polymerase? How is it involved in transcription?
9. What are promoter and termination sites?
10. Given the following DNA strand, write the product of transcription: TACCTTAGCATG
11. What are the three types of RNA and what does each type of molecule do during protein synthesis?
12. Given the following codons, write down the matching anticodons: GUU CUA AAC
13. On what molecule are anticodons found?
14. Using the codons from #11, which amino acids will be transferred to the ribosome during translation?
15. What is translation? Where does translation occur?