1. Which of the following have cis/trans isomers?

   ![Diagram showing cis and trans isomers]

2. Which of the following make a pair of cis/trans isomers?

   ![Diagram showing isomers I, II, III, and IV]

   - I & II
   - I & III
   - (II & III are identical)

3. How many chiral carbons are there in this sugar?

   ![Diagram of a sugar molecule]

   4 chiral carbons
4. A polypeptide is
A. an addition polymer of amino acids
B. a part of nucleic acids
C. a polymer of sugar molecules
D. a condensation polymer of amino acids
E. none of these

5. Is the following amino acid classified as polar, nonpolar, or charged?

\[ \text{nonpolar} \]

6. What forces are responsible for the following?
   a. primary protein structure  \text{covalent bonds (peptide bonds or amides)}
   b. secondary protein structure  \text{H-bonding}
   c. tertiary protein structure  \text{IMFs, ionic & covalent bonds}
   d. DNA base-pairing  \text{H-bonding}

7. Write the complementary strand for this DNA segment:

\[
\begin{align*}
\text{- ACAGTCTGAT -} \\
\text{- TGTCAGCA -}
\end{align*}
\]