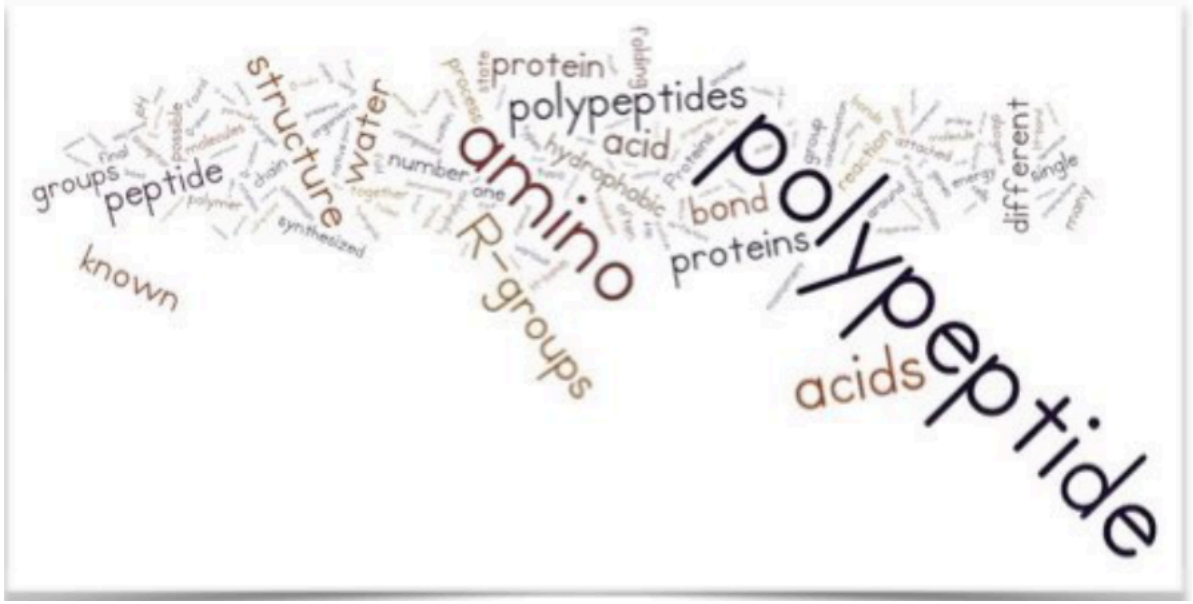
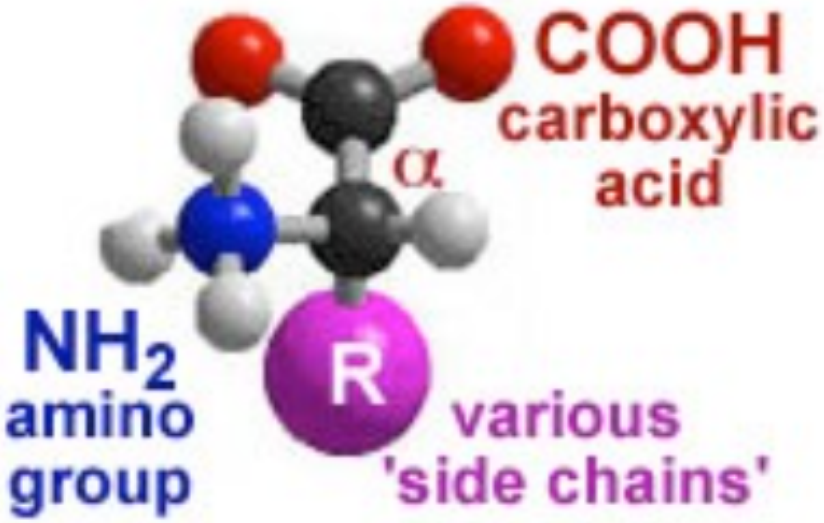
starting chapter 8

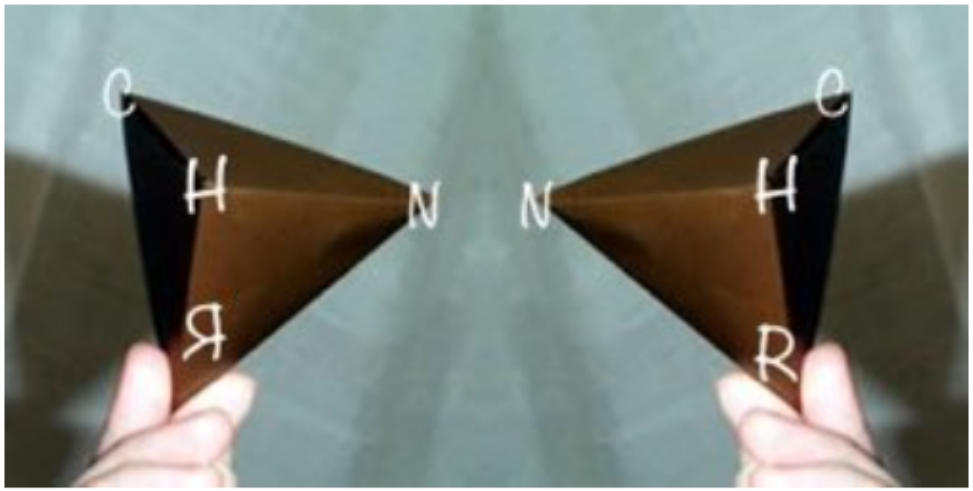


(any questions about chapter 7?)

check course web site for midterm information

what is an amino acid?





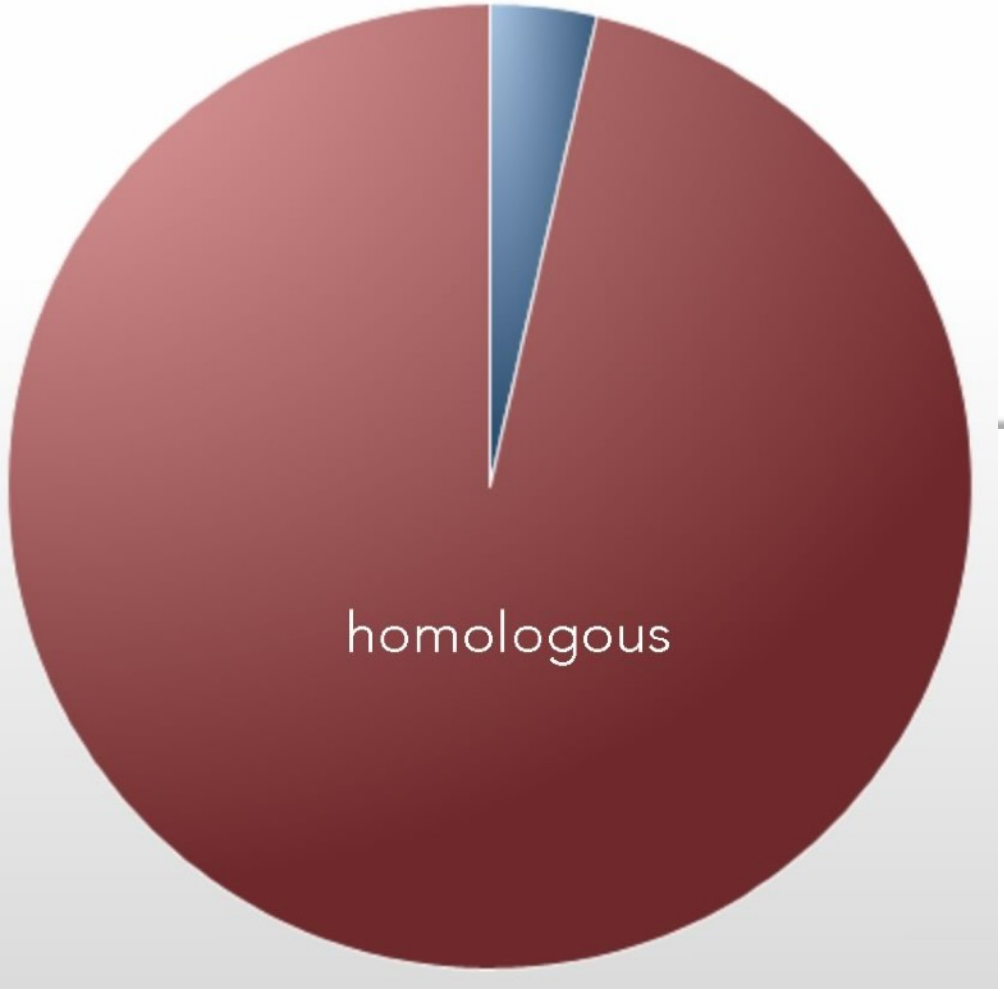
Left and Right (dextro or D)

Chapter 8.1 **pp. 177-181** Why are there two "mirror image" forms of most amino acids? Draw the mirror image amino acid and explain your thinking.

There are two mirror image amino acids because when the four groups attached to the carbn molecule are all different, the resulting amino acid can exist in two possible forms known as enantiomeric.

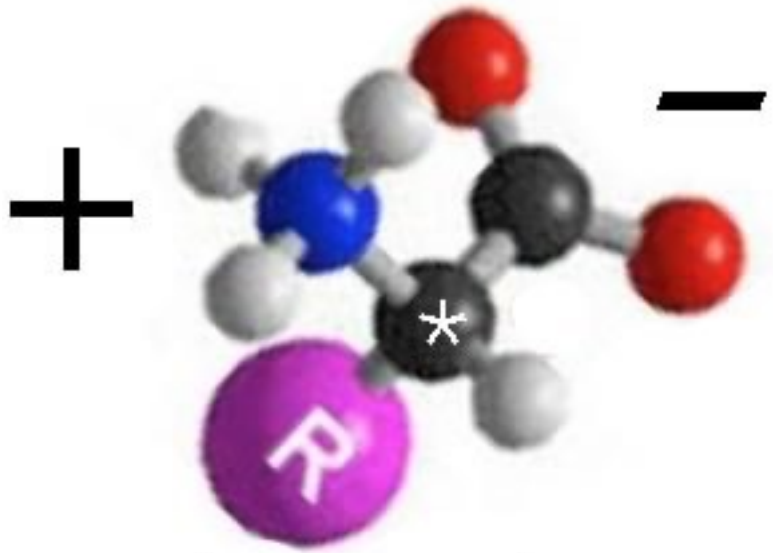
Draw | Erase | Reset

Would you consider the universal use of L-amino acids in proteins a homologous or an analogous trait? Explain below ...

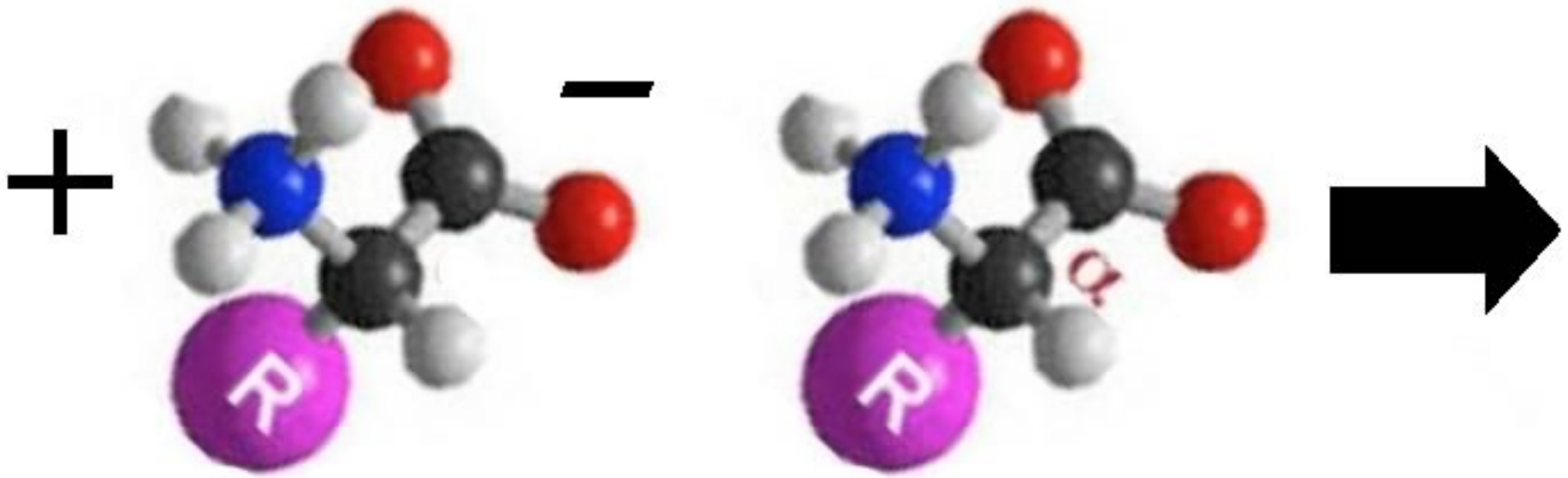


- analogous
- homologous
- unknowable
- Sorry, I do not remember what homologous and analogous mean

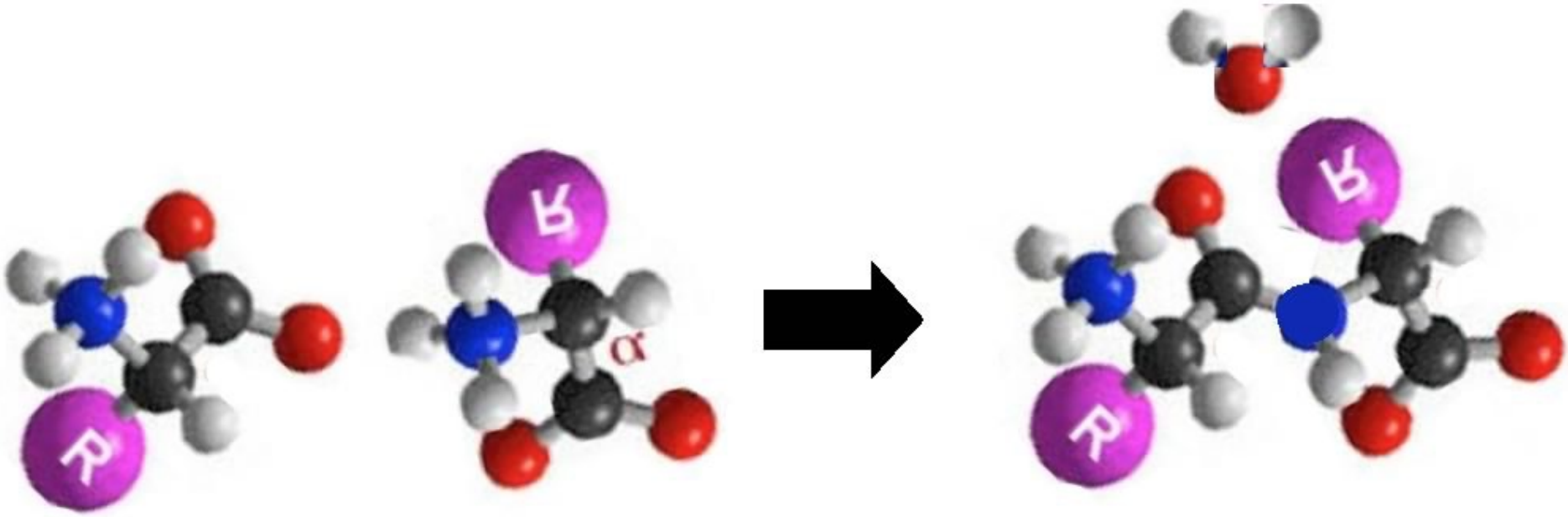
what is a polypeptide?

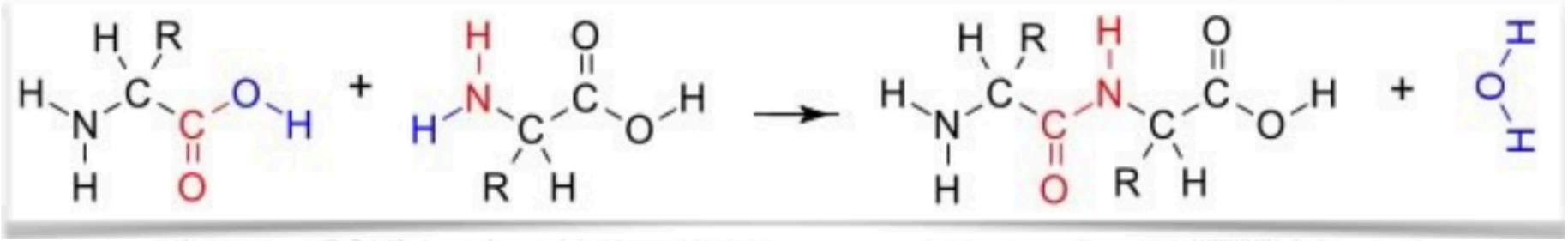


what is a polypeptide?

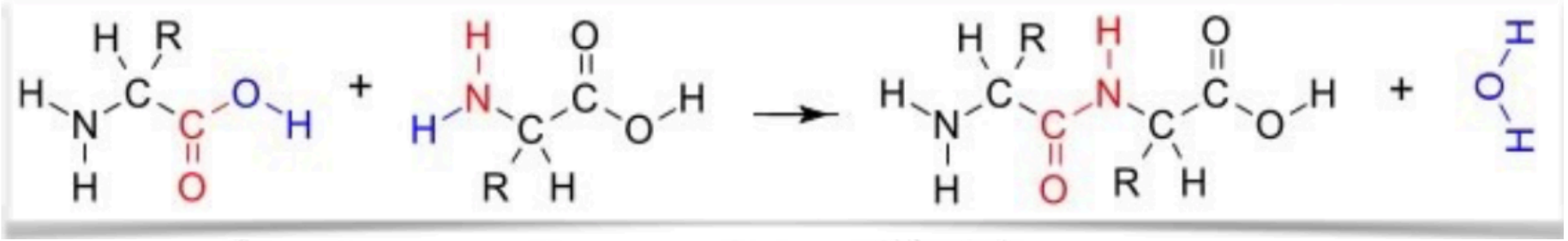


what is a polypeptide?

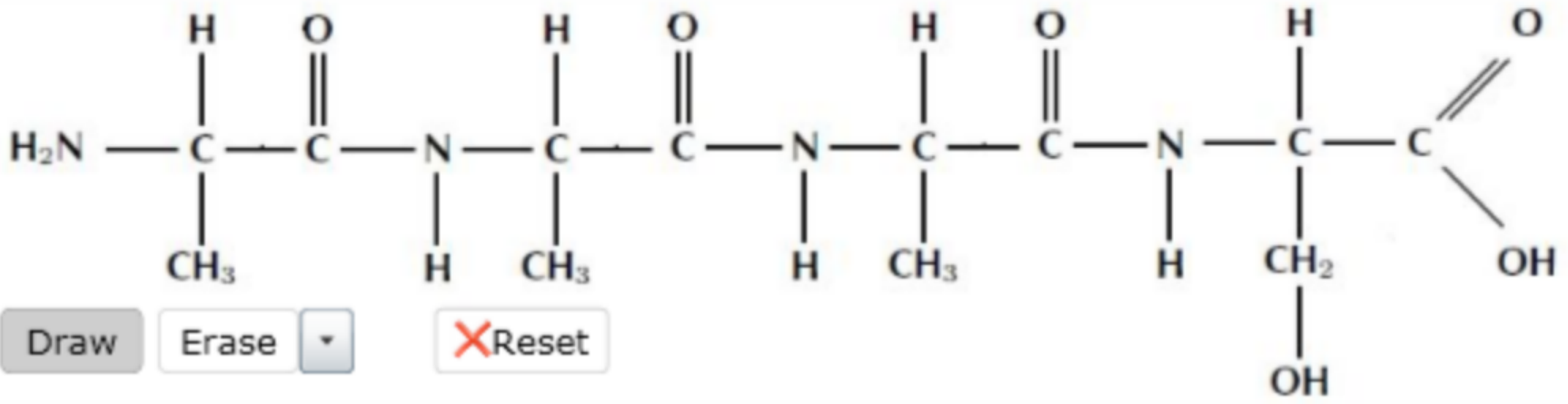




Group question: How is a polypeptide like a polynucleotide (nucleic acid)? How is it different?



Circle the R groups

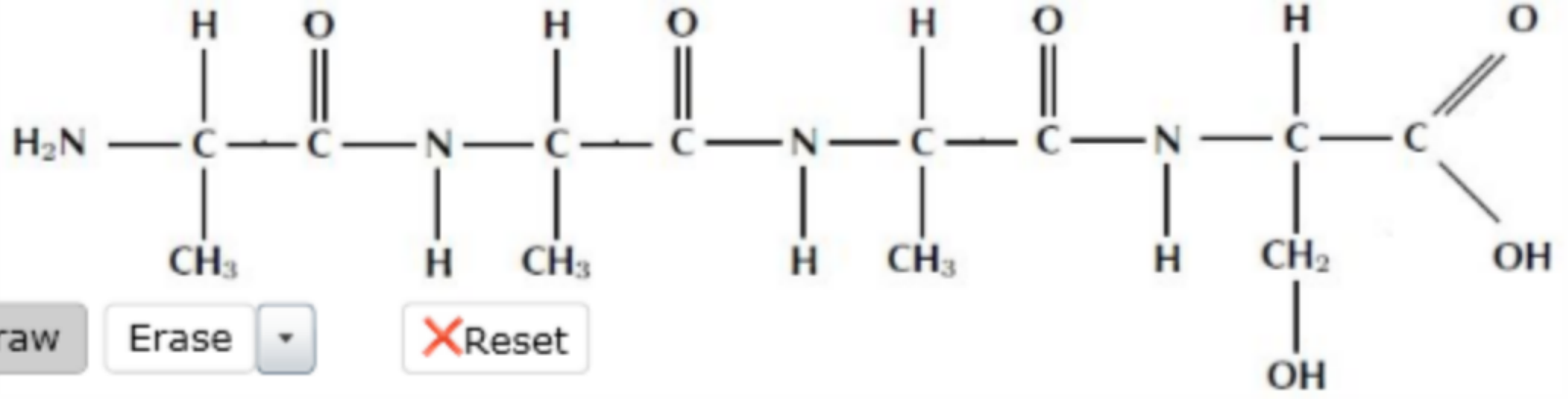


Draw | Erase | Reset

How many peptide bonds are present

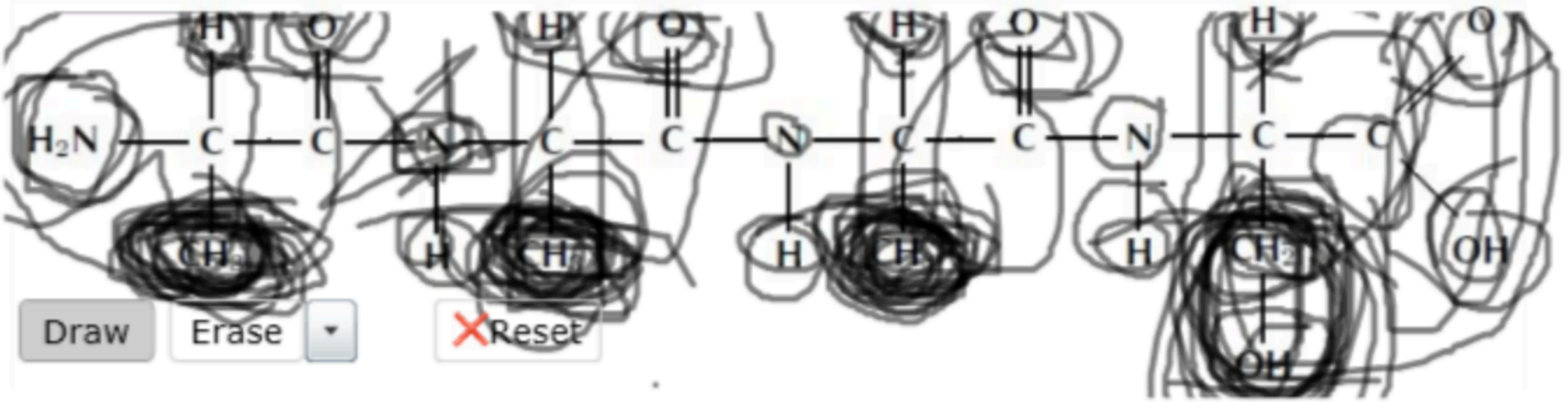
Check

Circule the peptide bonds

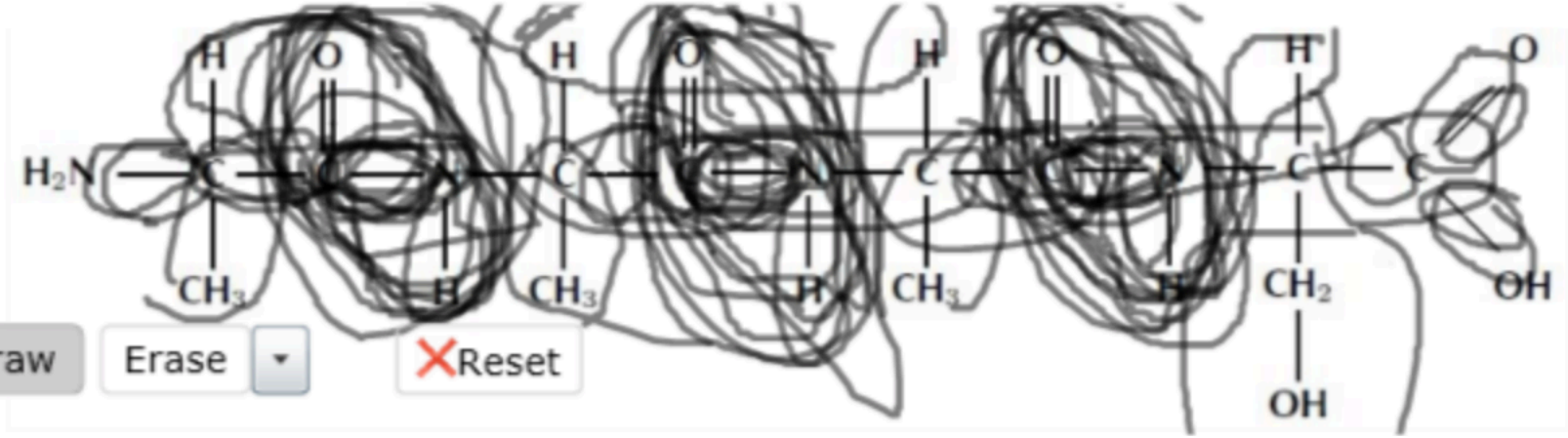


Draw | Erase | Reset

Circle all of the R groups (please)

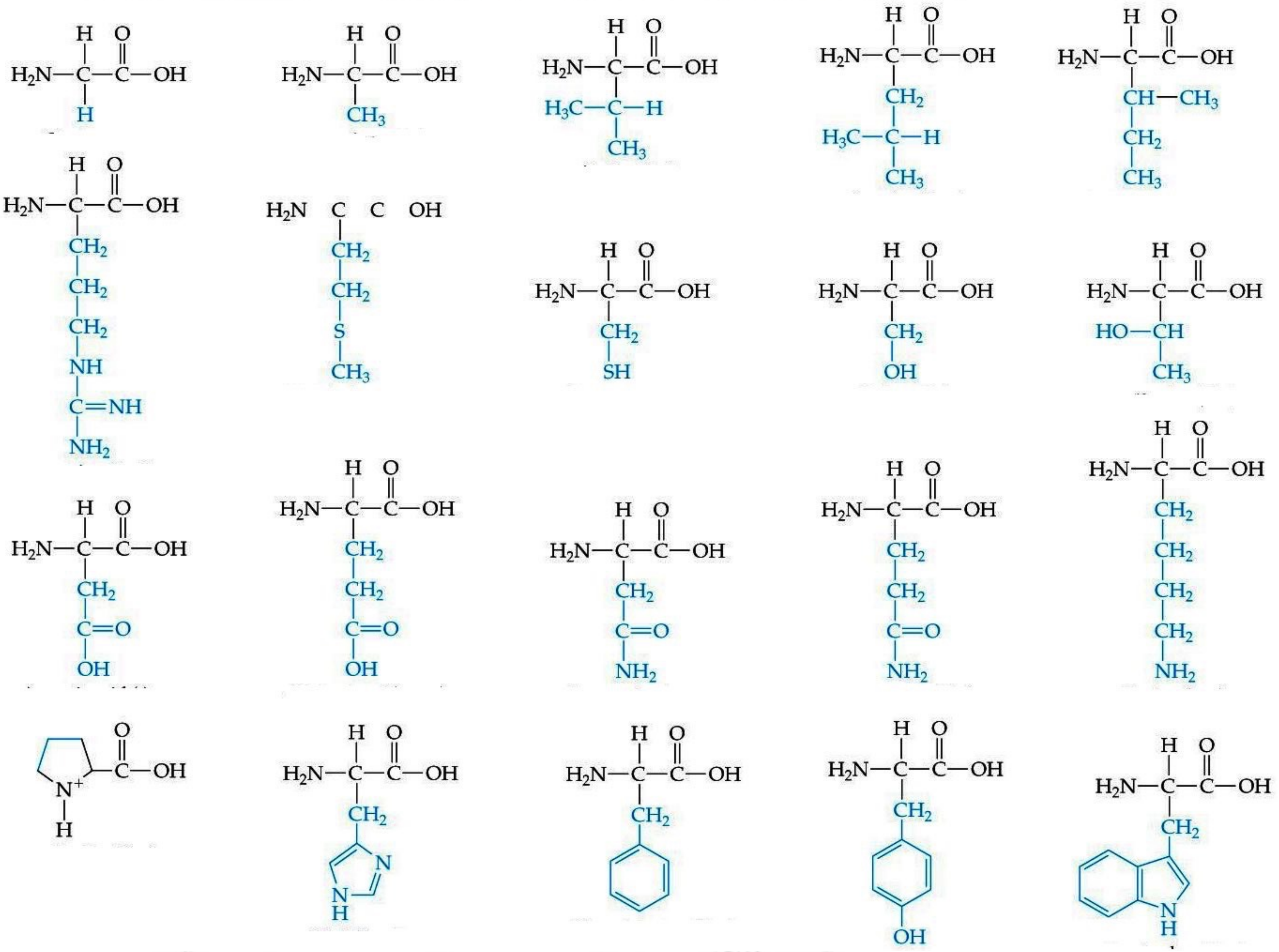


Circle all of the peptide bonds



Draw Erase Reset

Circle most hydrophobic R-groups

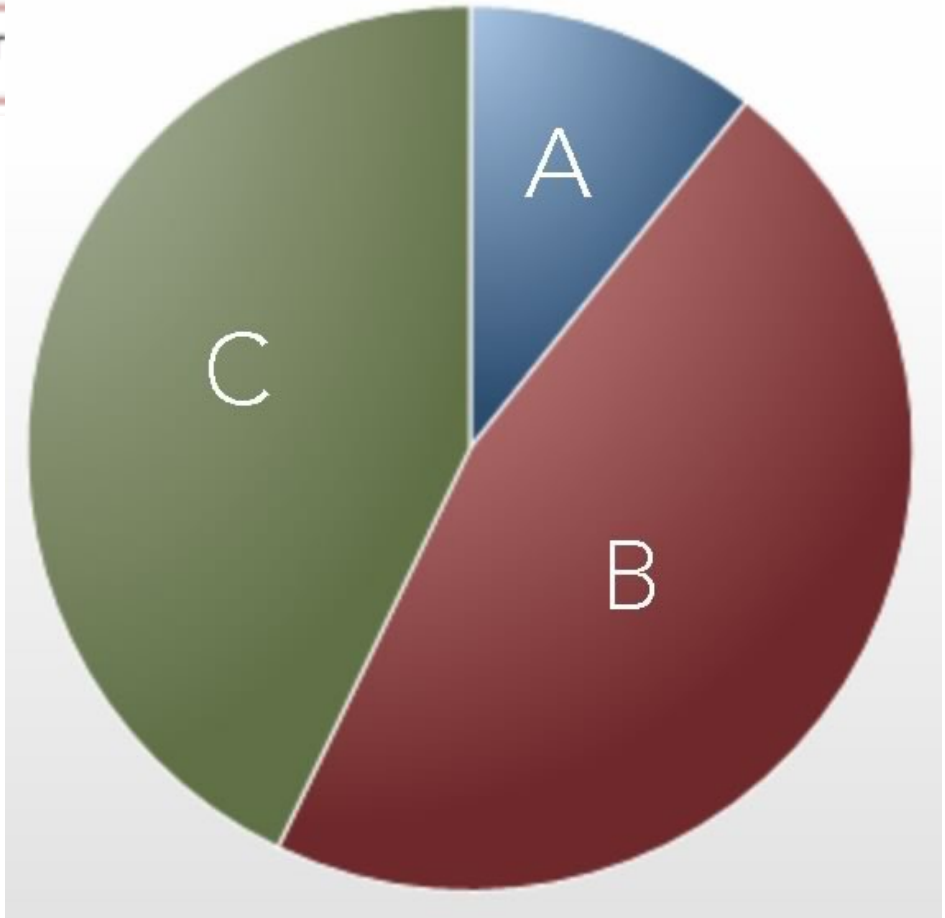


A polypeptide is synthesized and assumes a highly extended configuration in aqueous solution. Which prediction (regarding its composition) makes most sense?

- A. It contains mainly hydrophobic amino acids
- B. It contains mainly hydrophilic amino acids
- C. It contains a roungly equal mix of hydrophilic and hydrophobic amino acids.

Explain the logic of your answers are wrong (or

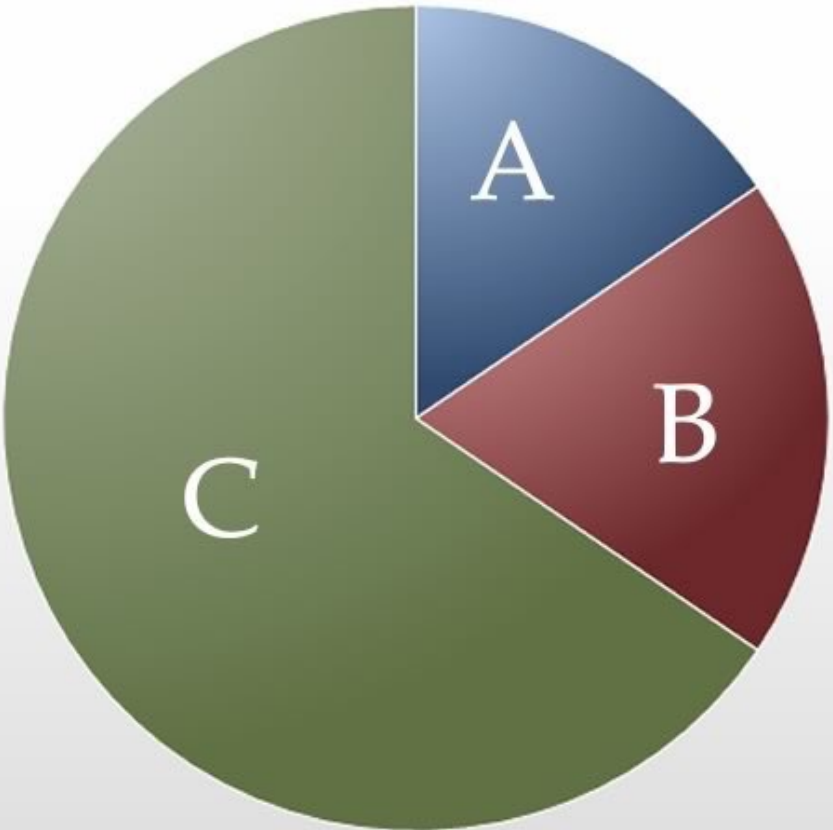
Which is correct and why?



Q: A polypeptide is synthesized and assumes a compact configuration, but is soluble in aqueous solution. Which prediction (regarding its composition) makes most sense?

- a. It contains mainly hydrophobic amino acids
- b. It contains a roughly equal mix of acidic and basic amino acids
- c. It contains a roungly equal mix of hydrophilic and hydrophobic amino acids.

Explain why the wrong answers are wrong



Group: How is the sequence of amino acids in a polypeptide determined?

Consider the DNA sequence that determines an mRNA sequence, that encodes a polypeptide sequence: which is longer in terms of monomeric units?

label the ends of the molecules

RNA transcript

mRNA

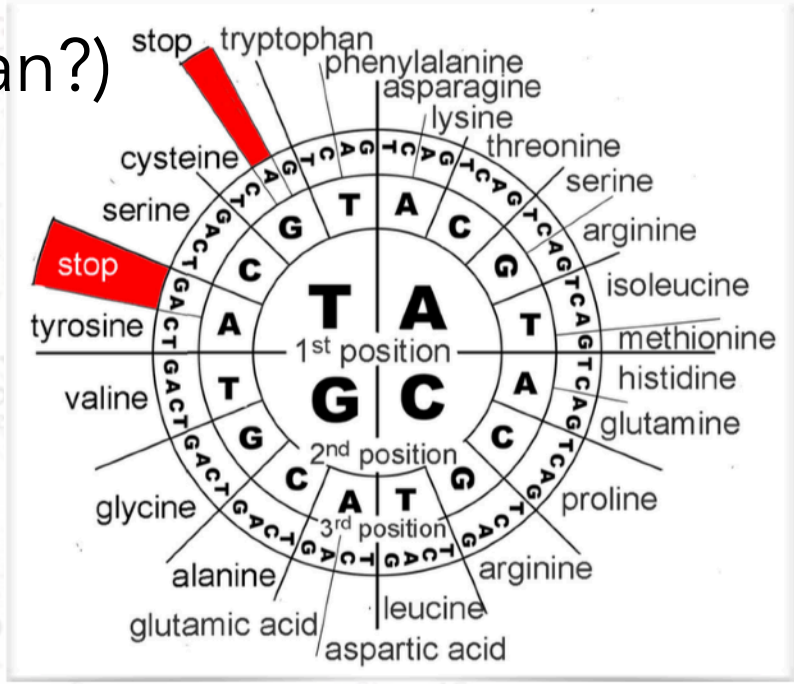
polypeptide

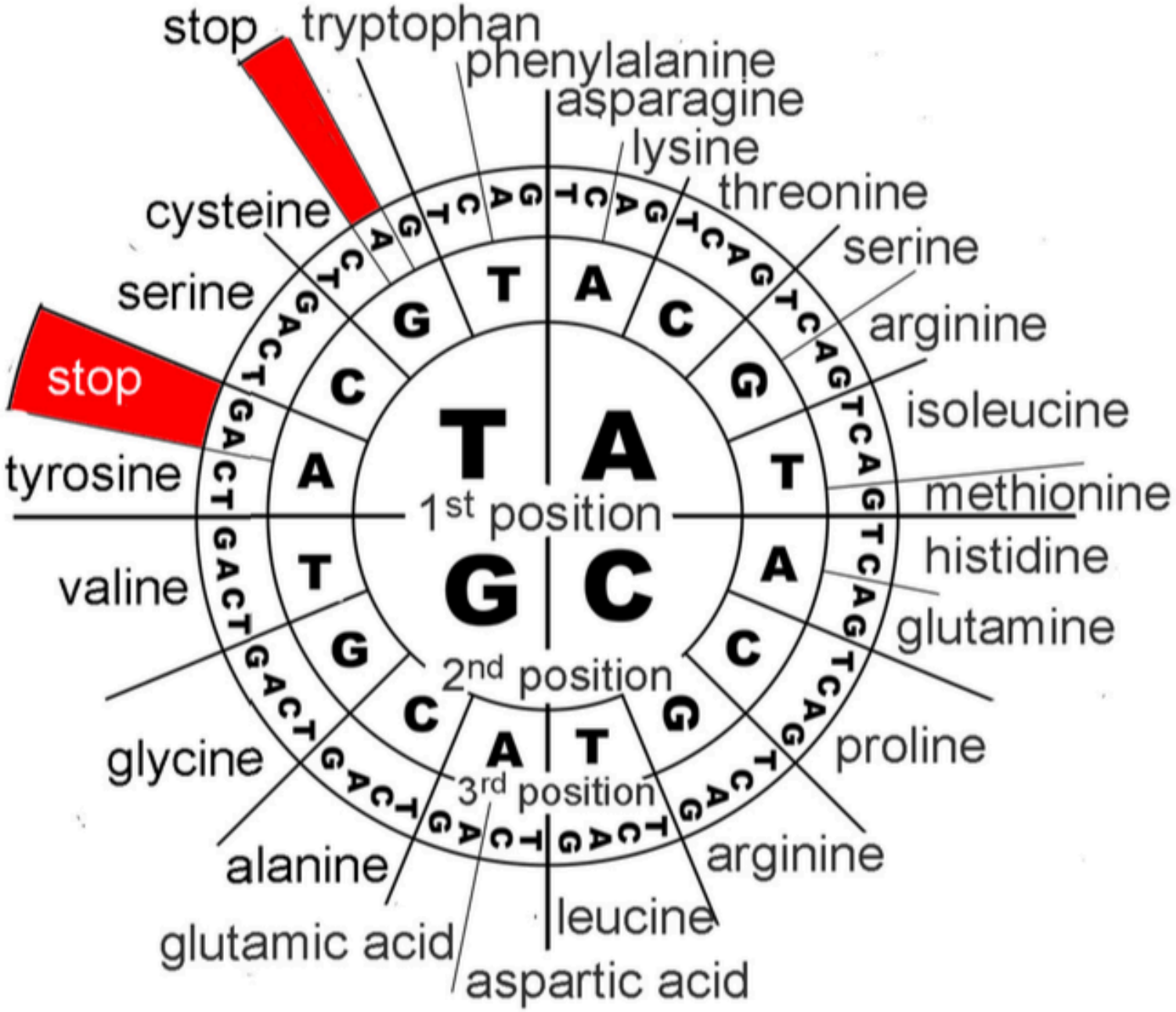
key elements of genetic code

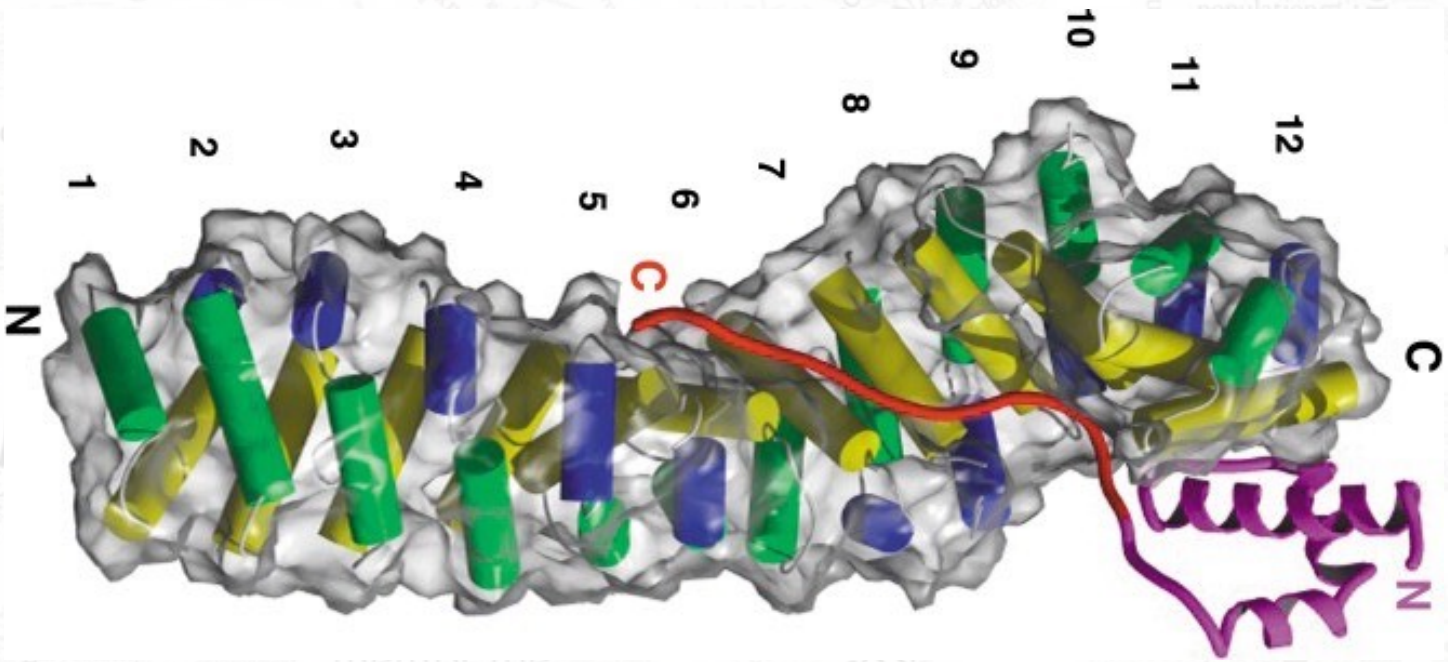
punctuated (what does that mean?)

unambiguous

redundant




stop
tryptophan
phenylalanine
asparagine
lysine
threonine
serine
arginine
isoleucine
methionine
histidine
glutamine
proline
arginine
leucine
aspartic acid
alanine
glutamic acid
glycine
valine
tyrosine
stop
cysteine
serine
1st position
2nd position
3rd position
T
A
G
C



What is a protein?

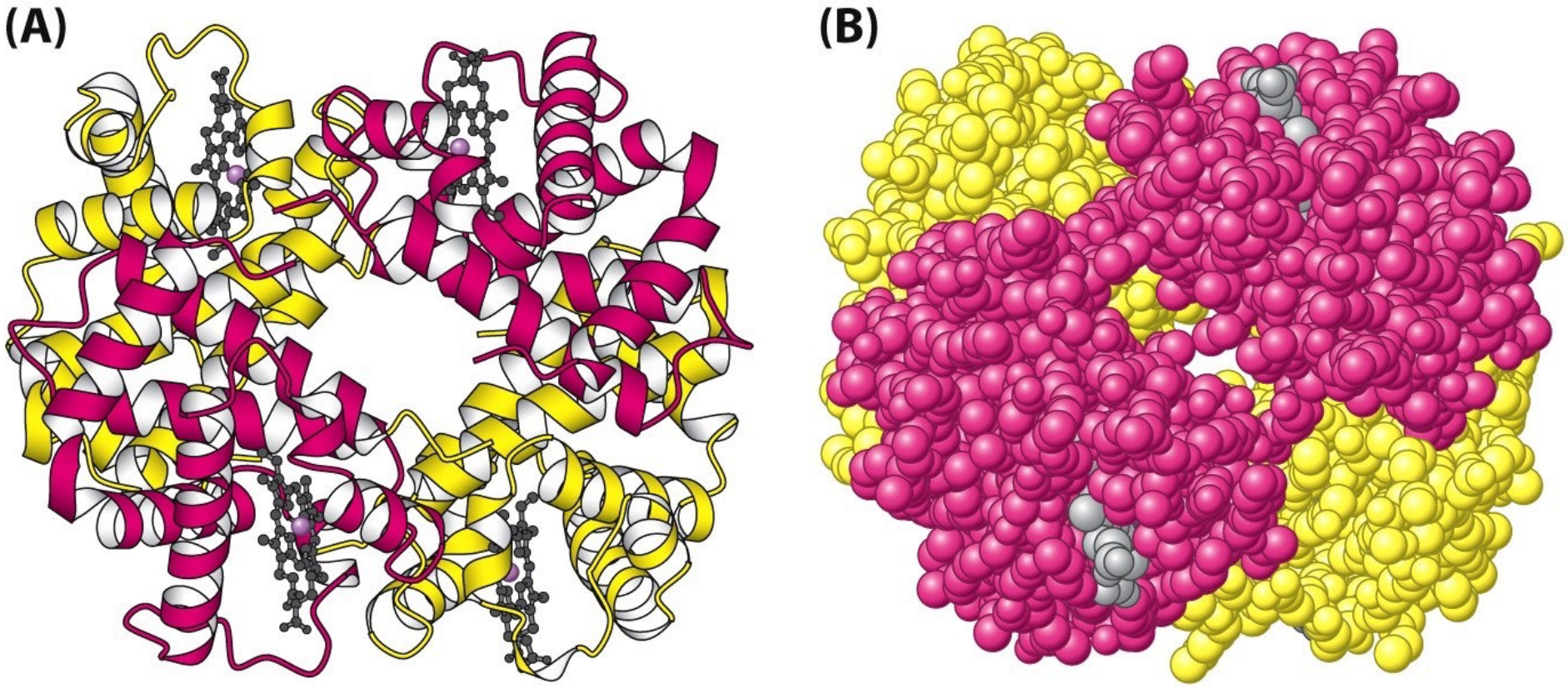


Figure 2.49
***Biochemistry*, Seventh Edition**

What is a protein?