Worksheet 12

1.  a) How do amino acids react to form proteins?  b) Draw the bond that links amino acids together in proteins. What is this called?

2.  What amino acids would be obtained from the hydrolysis of the following tripeptide?

\[
\begin{align*}
\text{H}_2\text{NCHCNHCHCNHCHCOH} \\
(\text{CH}_3)_2\text{CH} & \quad \text{H}_2\text{COH} & \quad \text{H}_2\text{CCH}_2\text{COH}
\end{align*}
\]

3.  In your own words define a) a carbohydrate b) monosaccharide, c) disaccharide, d) polysaccharide.

4.  Locate the chiral carbon atoms, if any in each of the following structures

\[
\begin{align*}
a) \text{HOCH}_2\text{CH}_2\text{CCH}_2\text{OH} & \quad b) \text{HOCH}_2\text{CHCCH}_2\text{OH} & \quad c) \text{HOCCCHHC}_2\text{H}_5 \\
\end{align*}
\]

5.  A nucleoside consists of an organic base of the kind shown in Section 25.10, bound by ribose or deoxyribose. Draw the structure for deoxyguanosine, formed from guanine and deoxyribose.

6.  If a molecule is an “ene-one”, what functional groups must it have?