UNIT 2 The Chemistry of Biology

**DEHYDRATION SYNTHESIS & HYDROLISIS ~ VOCABULARY**

The following diagram shows a schematic for DEHYDRATION SYNTHESIS and HYDROLYSIS.

**Dehydration synthesis** is the formation of a BOND between two MONOMERS, while losing a

WATER MOLECULE (H2O). The water molecule (H2O) is lost because in order to make the bond, one monomer must lose a hydrogen (H) and the other must lose a hydroxide (OH) to make room for bonding.

**Hydrolysis** is the BREAKING APART of a POLYMER into two or more MONOMERS. Hydrolysis occurs at each site where the bond between two monomers is broken. When the bond is broken, a WATER MOLECULE (H2O) donates a hydrogen (H) to one monomer, and a hydroxide (OH) to the other monomer. The H and OH fill in where the bond was originally to complete each newly separated monomer.

**WORD**

**BANK**

DEHYDRATE

--‐LYSIS

MONOMER

HYDRO--‐

DEHYDRATION SYNTHESIS

POLYMER

SYNTHESIS

HYDROLYSIS

**VOCABULARY:** MATCH the prefix, suffix, OR word from the word bank below to its

definition.

1) To split, or break apart; to release \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) To make something \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) Many monomers hooked together \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4) To lose or remove water; to take water away \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5) A process where a molecule loses two (or more) smaller molecules and gains the

‘parts’ of a water on the broken ends \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6) Means ‘WATER’ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7) Building block or single unit of a polymer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8) A process where a water molecule is lost to form a bond between two monomers \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_