

# BIOL 1001 Midterm 1 Review

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# Order from Weakest to Strongest

- ▶ Covalent Bonds
- ▶ Van der Waals Interactions
- ▶ Ionic Bonds
- ▶ Hydrogen Bonds

# Name the Differences Between These

- ▶ Polar Covalent Bonds
- ▶ Non-Polar Covalent Bonds

# Name the Differences Between These

► Acids

► Bases

# Lake has pH of 9

- ▶ What is the hydroxide ion concentration?
- ▶ What is the proton concentration?

# How does a buffer act...

- ▶ Under basic conditions?
- ▶ Under acidic conditions?

# Match the small organic building blocks to the large organic macromolecules

## Small

- ▶ Sugars
- ▶ Amino Acids
- ▶ Fatty Acids
- ▶ Nucleotides

## Large

- ▶ Proteins
- ▶ Nucleic Acids
- ▶ Lipids
- ▶ Polysaccharides, Starches, Glycogen

In what ways do sugars differ from each other?



# How do glycosidic bonds form and how do these differ?

► A Polysaccharides

► B Polysaccharides

What polysaccharide stores energy in each of the following?

► Plants

► Animals

True or False: Our body contains  
essential fatty acids

What is Gonane?

Ture or False: The lipids present in the cell membrane are known as fats

# What do these types of bonds do in the basic protein structure?

► Covalent Bonds

► Non-covalent Bonds

True or False: Proteins can only contain  
1 polypeptide chain

# What are the components of each of the levels of protein structure?

- ▶ Primary
- ▶ Secondary
- ▶ Tertiary
- ▶ Quaternary



What can cause protein denaturation?

How do Phospholipids vary in structure  
from Fats?

What are the 3 main cell membrane components?

True or False: Polar & Charged molecules can pass through the cell membrane

# Functions of membrane proteins

Questions?

Good Luck Everybody! (: