

# Anatomy and Physiology I

## Chapter 2 Study Guide Part 1

- What is matter?
- What is chemistry?
- What is biochemistry?
- What is an atom?
- What are the components of an atom?
- What charges do each component carry?
- How many electrons can the outer shell hold?
- What happens if the outer shell is empty?
- What is an ion?
- What is a cation?
- Does a cation gain or lose electrons?
- What is an anion?
- Does an anion gain or lose electrons?
- What happens if a cation comes near an anion?
- What is a covalent bond?
- What is called when two more atoms join together?
- What is another name for that union?
- What are the most common elements in the human body?
- What are inorganic molecules?
- What are not the primary atoms in an inorganic molecule?
- What is a salt?
- What is an electrolyte?
- What is an acid?
- Is an acid a proton donor or acceptor?
- What is the difference between strong and weak acids?
- What is a base?
- Is a base a proton donor or acceptor?
- What is formed during a neutralization reaction?
- What is the name of the scale that measures the concentration of hydrogen ions in a solution?
- What is the range of pH measurements possible?
- What is the pH of an acid?
- What is the pH of a base?
- What is neutral?

- What is the pH of blood?
- What is the pH of the stomach fluid?
- What is the pH of urine?
- What is a buffer?
- What happens if the pH is too low?
- What happens if the pH is too high?
- What atoms make up organic compounds?
- What organic compounds are found in living organisms?
- What are the two forms of energy?
- What molecule is used by humans for energy?
- What is a carbohydrate?
- What is the general formula of a carbohydrate?
- How many sugar molecules are found in a monosaccharide?
- Disaccharide?
- Polysaccharide?
- What is the most important monosaccharide in humans?
- What are the two hexose sugars found in humans?
- What reaction breaks down disaccharides and polysaccharides into monosaccharides?
- What are the three important polysaccharides in living organisms?
- What form of polysaccharide is used to store glucose in humans?
- Is cellulose absorbable in humans?
- What are the building blocks of proteins?
- How many amino acids are there?
- What is meant by an essential amino acid?
- How many amino acids are essential?
- What are some functions of proteins?
- How many proteins can be made?
- Describe the structural hierarchy of proteins?
- What are lipids made of?
- Are lipids hydrophobic or hydrophilic?
- Is saturated fat solid or liquid at room temp?
- What about unsaturated?
- What is a triglyceride?
- What is a phospholipid?
- What cell structure is made of phospholipids?
- What are nucleic acids made of?
- What is DNA involved in?
- What is RNA involved in?
- What is metabolism?
- What is it called when molecules are built up from simpler molecules/ atoms?

- What is it called when molecules are torn down from simpler molecules?
- What are the reasons for catabolism?
- What do enzymes do?
- Can enzymes force two atoms to come together that would not normally do so?
- What is the name of the site that an atom binds to in an enzyme?
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