

What do each of these terms mean?

- Atom
- Molecule
- Element
- Compound
- Organic
- Inorganic

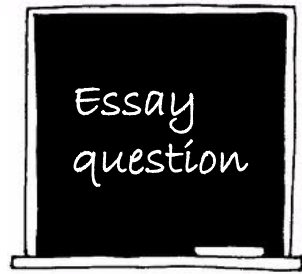
What are the most common elements in living organisms?

What are the roles of magnesium, iron, phosphate and calcium in cell metabolism?

Explain how the properties of water are important to plants and animals.

What is the difference between monomers, dimers and polymers?

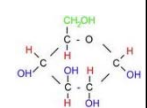
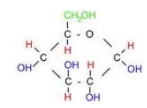
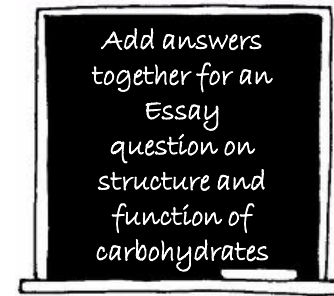
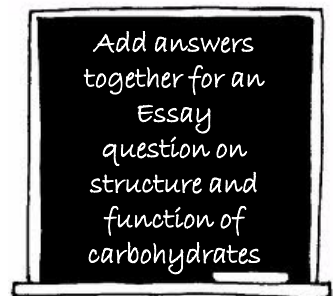
What is the definition of a condensation reaction?



What is the definition of a hydrolysis reaction?

What are the general names for the monomers, dimers and polymers of carbohydrates?

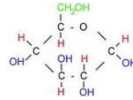
What properties do all monosaccharides have?



What is the general name for a monosaccharide which has

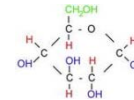
- 6 carbons?
- 5 carbons?
- 3 carbons?

Add answers together for an Essay question on structure and function of carbohydrates



Which two forms can the structural formula of glucose take?

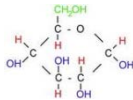
Add answers together for an Essay question on structure and function of carbohydrates



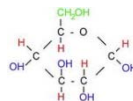
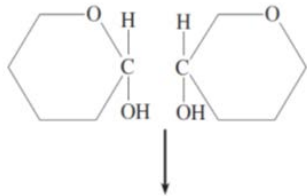
Name the disaccharide formed when you join the following monosaccharides in a condensation reaction.

1. Glucose and glucose
2. Glucose and fructose
3. Glucose and galactose

Add answers together for an Essay question on structure and function of carbohydrates

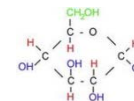


Complete the condensation reaction ensuring you label the bond



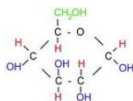
Draw out and label the 2 forms of glucose

Add answers together for an Essay question on structure and function of carbohydrates



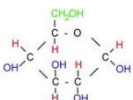
What are the main structural features of the polysaccharide starch?
How do these aid in its function?

Add answers together for an Essay question on structure and function of carbohydrates



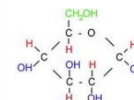
What are the main structural features of the polysaccharide glycogen?
How do these aid in its function?

Add answers together for an Essay question on structure and function of carbohydrates



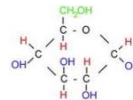
What are the main structural features of the polysaccharide cellulose?
How do these aid in its function?

Add answers together for an Essay question on structure and function of carbohydrates



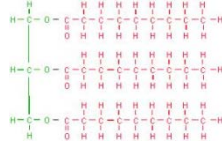
What are the main structural features of the mucopolysaccharide chitin?
How do these aid in its function?

Add answers together for an Essay question on structure and function of carbohydrates



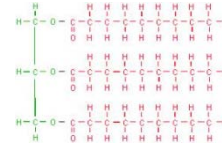
What are the elements which make up a lipid molecule?

Add answers together for an Essay question on structure and function of Lipids



What substance is a lipid insoluble in?
What type of substance is a lipid soluble in?

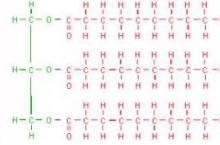
Add answers together for an Essay question on structure and function of Lipids



What is the name of a lipid which is a solid at room temperature?

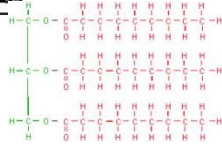
What is the name of a lipid which is a liquid at room temperature?

Add answers together for an Essay question on structure and function of Lipids



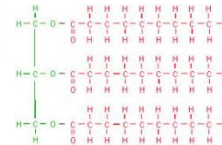
What are the main functions of lipids?

Add answers together for an Essay question on structure and function of Lipids



Draw a triglyceride, label the different sections and the ester bonds.

Add answers together for an Essay question on structure and function of Lipids



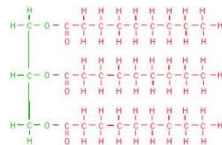
What is the difference between unsaturated and saturated fatty acids?

Add answers together for an Essay question on structure and function of Lipids



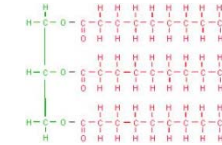
Why are lipids rather than carbohydrates used as an energy store in seeds and animals?

Add answers together for an Essay question on structure and function of Lipids



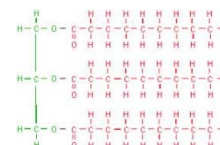
What are the components of phospholipids?

Add answers together for an Essay question on structure and function of Lipids

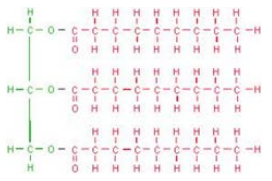


What properties do phospholipids have?

Add answers together for an Essay question on structure and function of Lipids

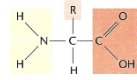


A high intake of fat, notably saturated fats, will lead to which condition?



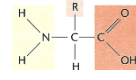
What is the general formula for amino acids?
What part has basic properties and which part has acidic properties?

Add answers together for an Essay question on structure and function of Proteins



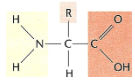
How many different types of amino acids are there and which section gives them this difference?

Add answers together for an Essay question on structure and function of Proteins



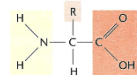
What is a polymer of amino acids called?

Add answers together for an Essay question on structure and function of Proteins



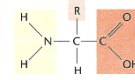
Draw a diagram to show the condensation reaction of 2 amino acids to form a dipeptide. Label the bond.

Add answers together for an Essay question on structure and function of Proteins



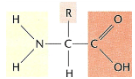
Proteins can be found in how many different levels of structure? What are they called?

Add answers together for an Essay question on structure and function of Proteins



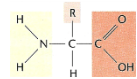
What is the definition for the primary structure? Which bond(s) would be present?

Add answers together for an Essay question on structure and function of Proteins



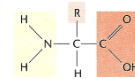
What is the definition for the secondary structure? Which bond(s) would be present?

Add answers together for an Essay question on structure and function of Proteins



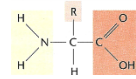
What is the definition for the tertiary structure? Which bond(s) would be present?

Add answers together for an Essay question on structure and function of Proteins



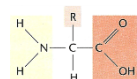
What is the definition for the quaternary structure? Which bond(s) would be present?

Add answers together for an Essay question on structure and function of Proteins



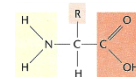
Proteins can be classified based on their function. Secondary structure proteins are often structural fibrous proteins. Keratin and collagen are examples. What is the structure and function of collagen?

Add answers together for an Essay question on structure and function of Proteins

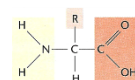


Proteins can be classified based on their function. Tertiary and quaternary structure proteins are globular proteins and they have a metabolic role. Name some examples of globular proteins.

Add answers together for an Essay question on structure and function of Proteins



Draw the hydrolysis reaction of dipeptide



What is the biochemical test for a lipid and what result will indicated a positive test?



What is the biochemical test for a reducing sugar (all monosaccharides and disaccharides EXCEPT sucrose) and what result will indicated a positive test?



What is the biochemical test for a starch and what result will indicated a positive test?



What is the biochemical test for a non reducing sugar (sucrose) and what result will indicated a positive test?

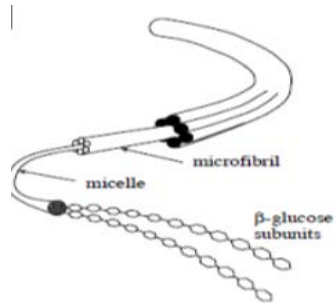


What is the biochemical test for a protein and what result will indicated a positive test?

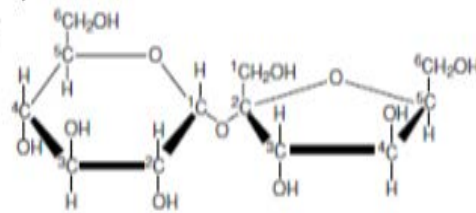


N.B this would be used to test for enzymes.

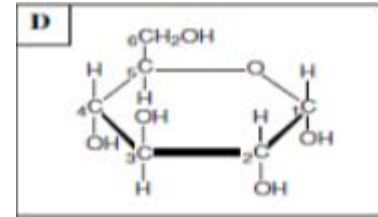
What is this?



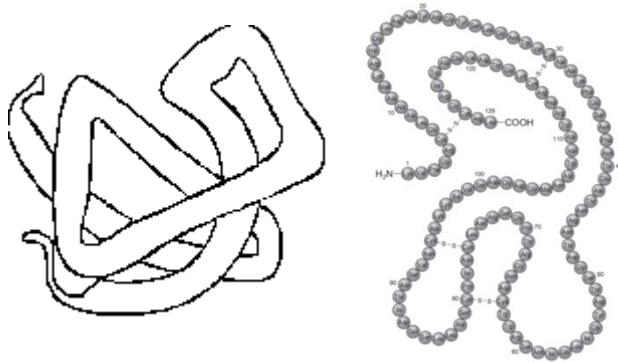
What is this?



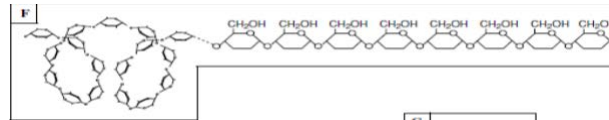
What is this?



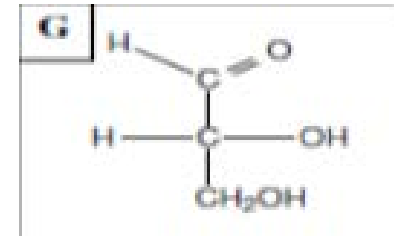
What is this?



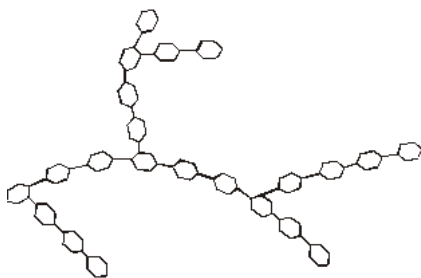
What is this?



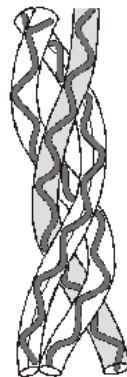
What is this?



What is this?



What is this?



What are these?

