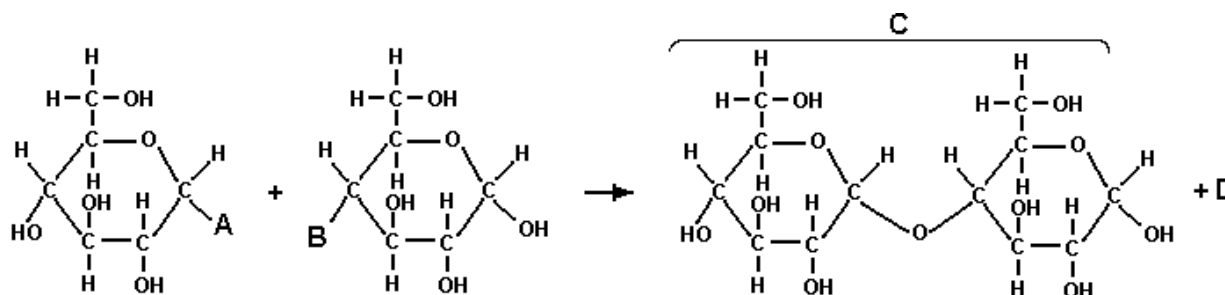


- Which substances are inorganic compounds? (1.) water and salts
(2.) proteins and carbohydrates (3.) fats and oils (4.) enzymes and hormones

Use the diagram below and your knowledge of biology to answer questions 2 through 4.



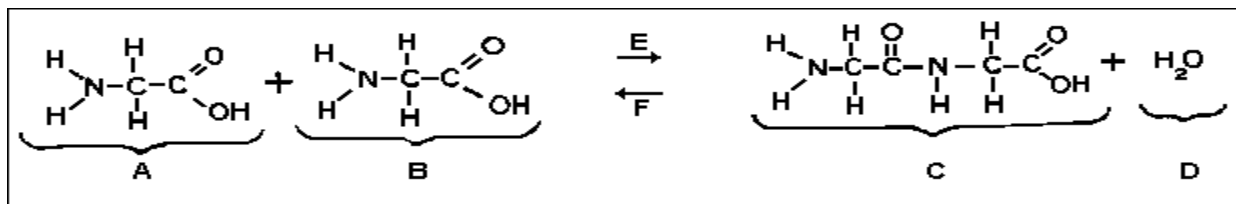
- Which chemical substance is labeled C? (1.) a lipid (2.) a dipeptide
(3.) a disaccharide (4.) DNA
- Which substance is represented by letter D? (1.) water (2.) salt (3.) ammonia
(4.) carbon dioxide
- Molecule C belongs in the general class of substances known as (1.) vitamins
(2.) minerals (3.) inorganic acids (4.) organic compounds

Reactants	Products
starch and water	A
B	amino acids
lipids and water	C

- The products represented by letter A in the chart are (1.) simple sugar molecules
(2.) ATP molecules (3.) alcohol molecules (4.) amino acid molecules
- The reactants represented by letter B in the chart are (1.) glucose and water
(2.) ATP and water (3.) proteins and water (4.) fatty acids and glycerol
- The products represented by letter C in the chart are (1.) glucose and water
(2.) ATP and water (3.) carbon dioxide and water (4.) fatty acids and glycerol
- Simple sugars and starches belong to the class of compounds called (1.) lipids
(2.) carbohydrates (3.) proteins (4.) nucleic acids
- In plants glucose is converted to cellulose, and in human muscle cells, glucose is converted to glycogen. These processes are examples of which life activity?
(1.) regulation (2.) respiration (3.) synthesis (4.) excretion
- Which substance is an inorganic compound? (1.) water (2.) glucose (3.) maltase
(4.) insulin

11. Which of these elements is found in the smallest amount in living matter?
 (1.) iodine (2.) carbon (3.) nitrogen (4.) oxygen

Base your answers to questions 12 and 13 on the chemical equation shown in the diagram and your knowledge of biology.



12. The reaction indicated by arrow E illustrates (1.) chemical digestion (2.) synthesis (3.) flufferfication (4.) aerobic respiration
13. The reverse reaction indicated by arrow E illustrates (1.) chemical digestion (2.) synthesis (3.) flufferfication (4.) aerobic respiration

Element	Number of Atoms			
	Molecule A	Molecule B	Molecule C	Molecule D
Hydrogen	12	0	3	0
Carbon	6	1	0	1
Nitrogen	0	0	1	0
Oxygen	6	2	0	3
Calcium	0	0	0	1

14. The chart above indicates the elements contained in four different molecules and the number of atoms of each element in those molecules. Which molecule can be classified as organic? (1.) A (2.) B (3.) C (4.) D
15. Which two chemical processes are represented by the equation below?
 $\text{starch} + \text{water} \xrightleftharpoons{\text{enzymes}} \text{sugars}$
 (1.) hydrolysis and dehydration synthesis (2.) photosynthesis and dehydration synthesis
 (3.) photosynthesis and respiration (4.) hydrolysis and respiration
16. Which term best describes a solution with a pH of 5?
 (1.) acidic (2.) neutral (3.) basic (4.) colorless
17. The shape of a protein molecule is influenced by (1.) whether it is organic or inorganic (2.) the sequence of amino acids in it (3.) the number of genes found in the nucleus (4.) the number of chromosomes in the cell
18. A characteristic shared by all enzymes, some hormones, and antibodies is that (1.) they are proteins whose shape determines their function (2.) the shape of the DNA they contain (3.) they are inorganic molecules they contain (4.) they contain many complex cell organelles