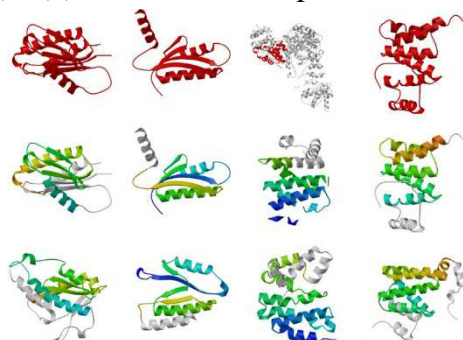


## PROTEINS

### I. Fill in the gaps

Proteins play a very important role in living organisms. They take part in the (1) ..... of different materials (e.g. hemoglobin), (2) ..... processes of metabolism, (enzymes), (3) ..... our body against pathogens (immune proteins), enable the (4) ..... of our body (muscle proteins).

During the hydrolysis of simple proteins only (5) ..... are produced, which are the building blocks of macromolecules. During the hydrolysis of (6)..... besides the amino acids other compounds (like carbohydrates and lipids) are also produced. In each building molecules there are two (7) ..... groups, the (8) ..... and the (9) .....



..... These functional groups enable the small molecules to join together while they react with each other. The building molecules of proteins differ only in the (10) .....

Proteins have very variable characteristics, they are sensitive to change of temperature and chemicals. Egg white dissolves in water, but the proteins in hair and nails are (11) .....

Precipitation of proteins from their solutions is called (12) ..... In this case molecules lose their hydration shells completely or partially.

### II. Write a letter „T” if the statement is true, and a letter „F” if it is false!

1. Permanent high fever is dangerous because it destroys proteins in our body.
2. Table salt causes the irreversible coagulation of proteins.
3. Table salt can be used for preservation of meat.
4. Sodium ions cause the irreversible coagulation of proteins, that's why they cause high blood pressure.
5. Copper compounds are poisonous, because copper ions cause the irreversible coagulation of proteins.
6. People poisoned by pesticides containing copper compound should be given milk.
7. Lactic acid causes the irreversible coagulation of milk proteins.
8. The digestion of proteins begins in the stomach.
9. Hydrolysis of proteins in the stomach occurs in alkaline medium.
10. Thyroxine, the hormone of thyroid gland belongs to proteins.

### III. Four types of association:

A: it is characteristic for the digestion of protein taking place in the foregut

B: it is characteristic for the digestion of protein taking place in the midgut

C: both of them

D: neither of them

1. It takes place only because of the effect of gastric juice
2. Pancreatic juice also takes part in the process
3. Bile is necessary in the process
4. Enzymes are needed in the process.
5. The process begins in the mouth cavity

**Solution:**

I.

1	transportation	2	speed up /catalyze	3	protect	4	motion
5	amino acids	6	proteides / complex proteins	7	functional	8	amino
9	carboxyl	10	side chain	11	insoluble in water	12	coagulation

II.

1	2	3	4	5	6	7	8	9	10
I	H	I	H	I	I	I	I	H	I

III.

1	2	3	4	5
A	B	D	C	D