Federal State Budgetary Educational Institution of Higher Education «North-Ossetia State Medical Academy» of the Ministry of Healthcare of the Russian Federation

Department of biological chemistry

Approved
Head of the department,
associate professor
A. E. Gurina
"3" February 2022 year.

Rating

Discipline of biological chemistry- biochemistry of the oral cavity
Course 1
Dentistry faculty

for the spring semester 2021-2022 school year

№	Date	The title of the topic	Marks	
			theory	practice
1.	15.02.22	Introductory lesson. Proteinogenic amino acids: structure, properties, classification. The role of oxy-amino acids in the formation of connective tissue proteins.	5	5
2.	15.02.22	Chemistry of simple proteins, structural organization of a protein molecule. Physico-chemical properties of simple proteins.	5	5
3.	22.02.22	Chemistry of complex proteins: classification, representatives, characteristics of prosthetic groups.	5	5
4.	22.02.22	Glycoproteins, their role in the formation of bone and tooth tissue. Proteoglycans and glycosaminoglycans of oral cavity tissues.	5	-
5.	01.03.22	Structure and properties of collagen proteins of oral cavity tissues. Collagen, structure, biosynthesis.	5	-
6.	01.03.22	Structure and properties of noncollagen proteins of oral cavity tissues. Adhesive and anti-adhesive proteins.	5	-
7.	**11.03.22**	**Module for the topic: "Chemistry and functions of proteins".**	**10**	**5**
8.	11.03.22	Structure and general properties of enzymes. The mechanism of enzymatic catalysis. Classification of enzymes.	5	5
9.	15.03.22	Vitamins as coenzymes. Water-soluble vitamins.	5	5
10.	15.03.22	Regulation of enzymes activity. Enzymes activators and inhibitors. Medical aspects of enzymology.	5	5
11.	**22.03.22**	**Module for the topic: "Enzymes".**	**10**	**5**
12.	22.03.22	Lipid composition of biological membranes. Structure and classification of lipids. Transmembrane transfer of substances, signal transmission into the cell.	5	-
13.	29.03.22	Fat-soluble vitamins. Participation in the formation of oral cavity tissues.	5	5
14.	29.03.22	Reactive oxygen species. Lipid peroxidation. Its role in norm and pathology.	5	-

15.	05.04.22	Energy exchange. Biological oxidation. Oxidative phosphorylation.	5	5
16.	05.04.22	Tricarboxylic acid cycle. Determination of succinate dehydrogenase activity.	5	5
17.	**12.04.22**	**Module for the topic: "Energy exchange, common ways of catabolism"**	**10**	**5**
18.	12.04.22	Structure, properties and functions of carbohydrates. Digestion of carbohydrates in the gastrointestinal tract.	5	5
19.	19.04.22	Anaerobic oxidation of glucose: glycolysis, stages, the concept of glycolytic oxidoreduction.	5	5
20.	19.04.22	Aerobic glycolysis: direct oxidation of glucose.	5	5
21.	26.04.22	Aerobic glycolysis: indirect oxidation of glucose. The pentose cycle and its biological significance.	5	-
22.	26.04.22	Regulation of blood glucose. Synthesis and mobilization of glycogen in the liver. Gluconeogenesis.	5	5
23.	03.05.22	Disorders of carbohydrate metabolism: diabetes mellitus. Glycogenoses.	5	-
24.	**03.05.22**	**Module for the topic: "Metabolism of carbohydrates".**	**10**	**5**
25.	10.05.22	Digestion and absorption of lipids in the gastrointestinal tract: conditions, factors. Characteristics of the stages.	5	5
26.	10.05.22	Metabolism of higher fatty acids: oxidation and biosynthesis.	5	5
27.	17.05.22	Ketone body metabolism: biosynthesis and catabolism. Determination of ketone bodies in urine.	5	5
28.	17.05.22	The exchange of simple and complex lipids: TAG and phospholipids.	5	-
29.	24.05.22	Cholesterol metabolism. Quantitative determination of cholesterol in blood serum. Transport forms of lipids. Pathology of lipid metabolism.	5	5
30.	**24.05.22**	**Module for the topic: "Lipid metabolism".**	**10**	**5**
Total			**285**	

Assistant of the department
_____ Kaitukova D.I.
"3" February 2022 year.