



## Passing Lecture On The Topic" Fluid Flow And Biophysical Properties " In The Online System

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### ABSTRACT

This article is devoted to the transition of "fluid flow and biophysical properties" in the module system. It is stated that it is possible to find the coefficient of viscosity in the Stox method, the coefficient of viscometric methods, to find the coefficient of viscosity in the axiom of Medicine, in diagnosis and in medical and forensic expertise. It is also described to find the coefficient of processes and surface tension on the surface of liquids by drip method.

### KEYWORDS

Liquid, viscosity, modulus, coefficient of internal friction, viscometer, hydraulic resistance, turbulent flow, laminar flow. Reynolds number. Poiseuille's formula, Newtonian and non-Newtonian fluids, ZOOM program, test, telegram, platform system.

### INTRODUCTION

Samarkand State Medical Institute (Sammi) Department of "medical and Biological Physics" conducts the training of bachelors in the system of modules of the Sammi platform of continuous education. Medical and Biological Physics are taught in the first course and 18 hours are allocated for the lecture. In

this article, the lecture on the topic "biophysics of liquids" covered the online passage of the lesson in the form of a webinar, Telegram, Zoom programs in the module system of the Sammi platform. The frequent spread of infectious diseases in different countries of the world, the

prevalence of coronavirus pandemics throughout our country at the moment, at the same time, the passage of lecture lessons in the online system is of great importance [1,2].

The liquid, according to its properties, lies between gases and solid bodies. Liquids form a large part of the human body, and if their migration leads to metabolism in the body, their action provides cells with nutrients and oxygen. It releases food residues and carbon dioxide from the cells.

The laws of the movement of a non-compressible liquid and its interaction with solid bodies that surround these liquids are studied, as can be applied in this topic, to which liquids belong to the Department of hydrodynamics of physics. In addition, deformation and fluidity properties are studied, which will be considered in the Department of reodogy.

#### DISTRIBUTION OF THE LECTURE LESSON BY TIME

1. Organizational part of the lesson (5 min).
2. Internal friction coefficient of liquids to be formed. Newton's formula. Puazeyl formula. Hydrodynamic resistance (15 min).
3. The role of knowledge of the coefficient of constipation in medicine (10 min).
4. Stox method of determining constipation. Viscometric methods (15 min).
5. Laminar and turbulent flows. Reynolds number (8 min).
6. Processes occurring on the surface of liquids (7 min).
7. Capillary. Phenomena of frostbite and hiccups in liquids (10 min).

8. Gas embolism (5 min).
9. Summary part of the lesson (5 min).

#### STUDENTS SHOULD KNOW ABOUT THE SUBJECT [3,4,5,6]

1. Causes of formation of the coefficient of viscosity.
2. Internal friction coefficient or Dynamic viscosity.
3. Newton's formula.
4. Units of measurement of the coefficient of viscosity.
5. Newton liquids.
6. Nonyuton liquids.
7. Blood viscosity and its use in the diagnosis.
8. The rate of deposition of erythrocytes
9. The use of internal friction coefficient in forensic medicine expertise.
10. Determination of the coefficient of viscosity by the method of Stox.
11. Stox formula.
12. Capillary or Ostvold viscometer.
13. Medicine or Gess viscometer. Fotogeleteoterapiya.
14. Rotational Viscometers.
15. Laminar flow of the socle.
16. Turbulent flow of liquids.
17. Reynolds number.
18. Puazeyl formula.
19. Avavlik resistance.
20. Surface tension forces.
21. The phenomenon of stumbling and stumbling.
22. Laplas Formula.
23. Determination of surface tension coefficient by drip method.

### **ADDITIONAL QUESTIONS FOR THE PREPARATION OF THE REPORT[3,5,7]**

1. What is said is" the coefficient of internal friction of liquids".
2. Newton's equation for viscous liquids.
3. Explain the dependence of the coefficient of friction on the speed gradient.
4. Liquids containing Newton and nonyuton.
5. The coefficient of viscosity of air, water, glycerin, blood and blood plasma at a temperature of 200 C.
6. Importance of internal friction coefficient in medicine.
7. Laminar and turbulent flow of liquids.
8. Reynolds number.
9. Finding Thrush in the Stox method.
10. Viscometers.
11. The effect of the coefficient of viscosity in medical processes.
12. Puazeyl formula.
13. Avavlik resistance.
14. Avavlig resistance when the pipes are connected in series.
15. Avavlig resistance when pipes are connected to the paralel.
16. Surface tension rod.
17. Blood viscosity.
18. Reynolds number.
19. What happened if the air in the nose passed from the laminar flow of blood in the blood vessels to the turbulent flow.
20. Determination of surface tension coefficient by drip method.

**The text of the lectures on the topic "biophysics of liquids" was presented in the Sammi Platform Module System.**

**In the Sammi Platform Module System, the following additional texts on the topic "biophysics of liquids" were presented.**

1. Finding the Cuckoo in the Stox method.
2. Capillary Viscometers. Ostvold and Gess Viscometers
3. Capillary figures.
4. Gas embolism.

### **Advantages of teaching online lessons in the module system of the Sammi platform "ZOOM" and the program Telegram**

1. Students will actively participate in the vedio conference through the "Zoom" program organized by the teacher or a webinar on the platform.
2. In the Platform Module System, the webinar will be organized before the start of the lecture lesson, and the name of the students attending the video conference and in which group they will study will be recorded.
3. In the program" Zoom " the image of the students is taken, the dialogue between the professor and the students on the training is heard and recorded on the speakers.
4. In the Telegram program, students will have the opportunity to write and answer questions related to the topic at any time.
5. The student can enter the Sammi Platform Module System at any time and independently master the data.
6. In the Platform Module System, it is possible to use both the text of the lecture and the practical lesson materials.
7. Students have the opportunity to get acquainted with the theme video-rolls in the Platform Module System.
8. Students have the opportunity to take off and strengthen their knowledge by studying tests on the subject, tests that arise from the situation.

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- 9. Professors and teachers have the opportunity to control the activity of students on a given topic.

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