**PROGRAM**

**Final exam in the discipline "Fundamentals of microscopic technology "**

The form of final exam is written. The ticket will contain 3 tasks (questions).

In the first and second tasks, you will need to answer a theoretical question. It is necessary to demonstrate the knowledge gained and have a good command of the terminology in the discipline.

The third task is an practical assignment that aims to test the practical skills of students.

Topics for which assignments will be drawn up:

1. Main methods of studying the microscopic and ultramicroscopic structure of cells and tissues

2. Methods of preparation of histological slides.

3. Safety regulations in the histological laboratory.

4. Stages of histological processing of biological material

5. General and special methods of staining histological preparations

6. Modern fundamentals of photomicrography and related software.

7. Necrosis.

8. Inflammation. Factors and mechanisms of inflammation.

9. Electron microscopic, histochemical and immunohistochemical methods for studying biological material.

10. Special microscopic methods for examining organs and tissues

11. Special staining methods.

BIBLIOGRAPHY

Main:

1. Volkova O.V., Yeletsky Yu.K. Basics of Histology with Histological Technique. - M .: Medicine, 1982.272 p.

2. Korzhevsky D.E., Gilyarov A.V. Basics of histological technique. St. Petersburg: SpetsLit, 2010 .-- 95 p.

3. Merkulov G.A. Course of histopathological technique. L .: Medicine, 1969

4. Fundamentals of general histology and histological technique. / Edited by prof. V.G. Eliseeva. M .: Medicine, 1967.

5. Workshop on histology, cytology and embryology. / Ed. N.A. Yurina, A.I. Radostina. M .: Publishing house of UDN, 1989.-253s., Ill.

6. Lilly R. Pathohistological technique and practical histochemistry. Moscow: Mir, 1969 .-- 643 p.

7. Luppa H. Fundamentals of histochemistry. Mir, M., 1980

Additional:

1. Romeys B. Microscopic technique. - Per. with him. - M .: Publishing house of foreign. Liter., 1954.

2. Petrov S.V., Raikhlin N.T. Guidelines for the immunohistochemical diagnosis of human tumors. Kazan, 2004. 451 s.

3. Basic rules for safe work in a chemical laboratory. M .: "Chemistry", 1964.

4. Labor protection and safety in the chemical industry. Collection of new normative materials. M .: "Chemistry", 1974.

5. Kiseli D. Practical Microtechnics and Histochemistry, Ed. Academy of Sciences of Hungary,

Budapest, 1962

6. Pierce E. Histochemistry. Theoretical and applied. IIL, M., 1962

7. Kononsky A.I. Histochemistry, Vyscha School, Kiev, 1978

Lecturer L.R. Sutuyeva