

**федеральное государственное бюджетное образовательное учреждение  
высшего образования  
Ярославский государственный медицинский университет  
Министерства здравоохранения Российской Федерации  
ФГБОУ ВО ЯГМУ Минздрава России**

**Фонд оценочных средств  
для проведения промежуточной аттестации  
по дисциплине  
ИНОСТРАННЫЙ ЯЗЫК ДЛЯ  
ПРОФЕССИОНАЛЬНОГО ОБЩЕНИЯ**

**Магистратура по направлению подготовки 19.04.01  
Биотехнология  
Направленность (профиль)  
«Промышленное производство  
биотехнологических лекарственных средств»  
Форма обучения ОЧНАЯ**

**Фонд оценочных средств разработан  
в соответствии с требованиями ФГОС**

Фонд оценочных средств для проведения промежуточной аттестации обучающихся по дисциплине Иностранный язык для профессионального общения составлен в соответствии с требованиями федерального государственного образовательного стандарта высшего образования – магистратура по направлению подготовки 19.04.01 Биотехнология и входит в состав Образовательной программы высшего образования – программы магистратуры по направлению подготовки 19.04.01 Биотехнология.

Фонд оценочных средств разработан на кафедре иностранных языков.  
Заведующий кафедрой – Бернгардт ОВ., канд. фил. наук, доцент

Разработчики:  
Ботерашвили Г.В., ст. преподаватель  
Кузнецова Е.Б., ст. преподаватель

Согласовано:

Директор института  
фармации доцент



Лаврентьева Л.И.

\_\_\_\_\_  
(подпись)

«16» сентября 2022 года

Утверждено Советом по управлению образовательной деятельностью  
«16» сентября 2022 года, протокол № 1

Председатель Совета по  
управлению  
образовательной  
деятельностью, проректор  
по образовательной  
деятельности и цифровой  
трансформации, доцент



Смирнова А.В.

\_\_\_\_\_  
(подпись)

«16» сентября 2022 года

## **1. Форма промежуточной аттестации – экзамен.**

## **2. Перечень компетенций, формируемых на этапе освоения дисциплины**

### **универсальные компетенции:**

УК-4 – способен применять современные коммуникативные технологии, в том числе на иностранном(ых) языке(ах), для академического и профессионального взаимодействия.

### **общепрофессиональные компетенции:**

ОПК-7 – способен представлять результаты профессиональной деятельности на русском и иностранном языках в виде научных докладов, отчетов, обзоров и публикаций с использованием современных информационных технологий.

Содержание компетенций с указанием индикаторов достижения компетенций представлено в рабочей программе по соответствующей дисциплине (таблица 1).

## **3. Показатели и критерии оценивания сформированности компетенций, шкалы оценивания**

Показатели и критерии оценивания сформированности компетенций, шкалы оценивания

| Этап промежуточной аттестации | Компетенции, сформированность которых оценивается | Показатели   | Критерии сформированности компетенций  |
|-------------------------------|---|--|--|
| Устное высказывание.          | УК-4<br>ОПК-7                                     | Уровень освоения навыка: знание качество выполнения практических заданий | <p><i>10 баллов.</i> Отличное владение языковыми средствами для построения сообщения на тему курса с использованием всех изученных речевых моделей. Высокий уровень владения грамматикой: в речи нет ошибок. Темп речи беглый, естественный (близкий к естественному).</p> <p><i>9 баллов.</i> Хорошее владение языковыми средствами для построения сообщения на тему курса с использованием всех изученных речевых моделей. Высокий уровень владения грамматикой: в речи практически нет грубых ошибок. Темп речи беглый, естественный (близкий к естественному). Допущены 2 лексические ошибки.</p> <p><i>8 баллов.</i> Хорошее владение языковыми средствами для построения сообщения на тему курса с использованием основных изученных речевых моделей. Хорошее владение грамматикой: 3 ошибки в пределах изученного материала. Темп речи ровный, с небольшими паузами.</p> <p><i>7 баллов.</i> Достаточное владение языковыми средствами для построения сообщения на тему курса с использованием основных изученных речевых моделей. Хорошее владение грамматикой: 4 ошибки в пределах изученного материала. Темп речи ровный, с небольшими паузами.</p> <p><i>6 баллов.</i> Достаточное владение языковыми средствами для построения высказываний на изученные устные темы. Достаточно большое количество ошибок, иногда препятствующих пониманию высказывания (5 ошибок). Темп речи замедленный, с паузами.</p> |

|                        |               |   |   |
|------------------------|---------------|---|---|
|                        |               |   | <p><i>5 баллов.</i> Ограниченное владение языковыми средствами для построения высказываний на изученные устные темы. Достаточно большое количество ошибок, иногда препятствующих пониманию высказывания (6 ошибок). Темп речи замедленный, с паузами.</p> <p><i>4 балла.</i> Владение очень ограниченным набором слов и простых фраз (7 ошибок), заученных наизусть. Большое количество грубых ошибок, часто препятствующих пониманию смысла высказывания.</p> <p><i>3 балла.</i> Владение очень ограниченным набором слов и простых фраз (8 ошибок), заученных наизусть. Большое количество грубых ошибок, часто препятствующих пониманию смысла высказывания.</p> <p><i>2 балла.</i> Неумение составлять высказывания, очень ограниченный лексический запас. Не выработаны грамматические умения. Допущены 9 ошибок.</p> <p><i>1 балл.</i> Не выработаны лексические и грамматические навыки, вследствие чего навыки говорения носят фрагментарный характер. Отсутствует связная речь. Допущены 10 ошибок.</p> <p><i>0 баллов.</i> Отказ от ответа.</p> |
| Устный перевод текста. | УК-4<br>ОПК-7 | Уровень освоения навыка: качество выполнения практических заданий | <p><i>10 баллов.</i> Содержание текста передано полностью с высказыванием собственного отношения к рассматриваемой проблеме, с использованием речевых клише для выделения основных мыслей, темы, оценки прочитанного.</p> <p><i>9 баллов.</i> Содержание текста передано полно с небольшими недочетами. Допущено одно искажение смысла вследствие неточного перевода отдельных слов или грамматических конструкций (допущены 2 лексико-грамматические ошибки).</p> <p><i>8 баллов.</i> Содержание текста передано достаточно полно. Допущены 2-3 случая искажения смысла или затруднения в понимании отдельных слов и словосочетаний (искажение, опущение, добавление информации).</p>  |

|               |               |   |  |
|---------------|---------------|---|--|
|               |               |   | <p><i>7 баллов.</i> Содержание текста передано в общих чертах. Допущены несущественные ошибки в понимании прочитанного (искажение, опущение, добавление информации), но не повлияли на общую трактовку текста. Допущены 4 ошибки.</p> <p><i>6 баллов.</i> Содержание текста передано фрагментарно. Перечислены отдельные факты, приведённые в тексте. Допущены ошибки в понимании прочитанного (искажение, опущение, добавление информации). Допущены 5 ошибок.</p> <p><i>5 баллов.</i> Содержание текста передано фрагментарно. Из изложенного трудно понять общую картину текста, отсутствуют ключевые факты. Допущены 6 ошибок.</p> <p><i>4 балла.</i> Содержание текста передано фрагментарно. Допущены существенные ошибки в понимании прочитанного, но основная мысль текста понята. Допущены 7 ошибок.</p> <p><i>3 балла.</i> Содержание текста передано фрагментарно. Понимание прочитанного сводится к отрывочным словам и словосочетаниям. Основная мысль текста понята, но не подтверждена фактической информацией.</p> <p><i>2 балла.</i> Содержание текста передано неправильно и несвязно.</p> <p><i>1 балл.</i> Содержание текста не передано.</p> <p><i>0 баллов.</i> Отказ от ответа.</p> |
| Тестирование. | УК-4<br>ОПК-7 | Число ответов на задания в тестовой форме, соответствующих эталону ответа | <p><i>10 баллов.</i> Свободное узнавание лексики на уровне слова, словосочетания, предложения, в потоке речи, при чтении и аудировании. Свободное использование лексики по теме в устной и письменной речи. Свободное (без анализа) распознавание грамматических явлений. Умение пользоваться изученными грамматическими явлениями в письменной и устной речи.</p> <p><i>9 баллов.</i> Узнавание более 90% лексики на всех уровнях. При употреблении в речи изученной лексики допускаются незначительные ошибки, которые исправляются в речи самим студентом или могут быть исправлены при анализе.</p>  |

|  |  |  |   |
|--|--|--|---|
|  |  |  | <p>Распознавание грамматических конструкций с помощью анализа формальных признаков. Ошибки исправляются самостоятельно, допущенные ошибки не являются критичными для передачи мысли.</p> <p><i>8 баллов.</i> Узнавание менее 90% лексики на всех уровнях. При употреблении в речи изученной лексики допускаются ошибки, которые могут быть исправлены при анализе. Распознавание грамматических конструкций с помощью анализа формальных признаков. Допущенные ошибки незначительно искажают смысл.</p> <p><i>7 баллов.</i> Узнавание более 70% изученной лексики на уровне слова, узнавание словосочетаний представляет незначительные трудности. Изученная лексика используется в речи в недостаточных объемах. Распознавание формальных признаков затруднено. Ошибки исправляются только при помощи преподавателя. Допущенные ошибки незначительно искажают смысл.</p> <p><i>6 баллов.</i> Узнавание менее 70% изученной лексики на уровне слова, узнавание словосочетаний представляет трудности. Использование в речи изученной лексики очень затруднено. Распознавание формальных признаков затруднено. Допущенные ошибки ведут к искажению смысла, хотя общий смысл передается верно.</p> <p><i>5 баллов.</i> Узнавание более 50% изученной лексики на уровне слова. Понимание словосочетаний лишь после анализа с помощью преподавателя. Неумение использовать изученную лексику в речи. Знание отдельных формальных признаков теоретическое. Отсутствие навыка переноса теоретических знаний на практику.</p> <p><i>4 балла.</i> Узнавание менее 50% изученной лексики на уровне слова. Понимание словосочетаний лишь после анализа с помощью преподавателя. Неумение использовать изученную лексику в речи. Знание некоторых формальных признаков</p> |
|--|--|--|---|

|  |  |  |   |
|--|--|--|---|
|  |  |  | <p>грамматических конструкций. Неумение увязать всё в общее целое.</p> <p><i>3 балла.</i> Узнавание более 30% изученной лексики. Отсутствие понимания словосочетаний. Неумение использовать изученную лексику в речи. Знание некоторых формальных признаков грамматических конструкций в теории сопряженное с их неправильным использованием. Смысл передан частично.</p> <p><i>2 балла.</i> Узнавание менее 30% изученной лексики. Отсутствие понимания словосочетаний. Неумение использовать изученную лексику в речи. Знание некоторых формальных признаков грамматических конструкций в теории сопряженное с их неправильным использованием. Смысл не передан.</p> <p><i>1 балл.</i> Узнавание менее 20% изученной лексики только при чтении. Отсутствие понимания словосочетаний. Неумение использовать изученную лексику в речи. Незнание формальных признаков грамматических конструкций. Неумение распознать грамматические конструкции.</p> <p><i>0 баллов.</i> Отказ от ответа.</p> |
|--|--|--|---|



## 4. Типовые контрольные задания и иные материалы для оценки знаний, умений, навыков, формируемых на этапе освоения дисциплины

### 4.1. Задания в тестовой форме

#### Формируемая компетенция – УК-4.

*Choose the correct answer for each question. One answer only.*

1. Say in English: собирать свое временно  
a) to collect plants in fields b) collection time  
c) collective farm time d) to collect in proper time
2. What is the English the word «незрелые фрукты»  
a) nezrelyi fruit b) unripe vegetables  
c) unripe fruit d) unripe plants
3. When is it important to collect medicinal plants?  
a) in early time b) in proper time  
c) in late time d) in the morning
4. When are flowers collected?  
a) before the time of earlier b) before the time of pollination  
c) in time cultivated d) I don't know
5. Translate into English “Во время моей практики”  
a) I am in practice b) during my playing  
c) vovremya practice d) during my practice
6. What is the English for the word «переливание крови».  
a) blood number b) blood transfusion  
c) blood bleeding d) blood circulation
7. What means the word «fracture»?  
a) it means a break in body b) it means a break in a leg  
c) it means a break in a bone d) it means a break in muscle

8. What is the English for «опухоль появляется».
- a) swelling comes b) broken limb
  - c) swelling appears d) to complain swelling
9. In fainting the person ... ..
- a) loses money b) loses mind
  - c) loses consciousness d) loses voice
10. How does the person feels himself in fainting?
- a) dizzy and weak b) better and strong c) angry and slow d) happy and joy
11. Choose the right word combination «предотвратить распространение инфекции» .
- a) to prevent the diseases b) to stop infectious
  - c) to stop bleeding d) to prevent the spread of infection
12. Translate the word into English. Применять 2 столовых ложек.
- a) to take 2 tablespoonful b) to give a teaspoonful
  - c) to eat s table spoonful d) to crack with spoon
13. Translate the word into English. Вписывать лекарство.
- a) to write suppositories b) to take medicine
  - c) to prescribe medicine d) to eat medicine
14. Find Russian translation. To keep the suppositories in cool place.
- a) возьми свечи быстро b) хранить свечи в прохладном месте
  - c) хранить препараты d) сохранить свечи в бутылке
15. Complete the sentence ... the bottle with the ... before use.
- a) Shake, mixture b) Take the mixture
  - c) Give , the medicine d) Bring the mixture
16. Translate the word combination into English. Наложить теплый компресс
- a) to read a warm compress b) to give a cold compress
  - c) to put a warm compress d) to listen a warm compires

17. The nurse must носить маску, когда меняет повязку.

- a) wear a mask, when she eats
- b) wear a mask, she takes a pulse
- c) wear a mask, when she changes dressing.
- d) wear a gown, when she give medicine

18. Chloroform had a strong but not ... ..

- a) an pleasant aroma b) an aroma smell
- c) an unpleasant smell d) a good smell

19. Как спросить в аптеке стоимость лекарства?

- a) How much does the medicine cost?
- b) Will you give the medicine or not?
- c) How much moneys should I give?
- d) How many does the medicine cost?

20. What is the English for “настой”?

- a) infusion b) decoction c) tincture d)mixture

21. Where do you usually get medicine?

- a) at the chemist’s b) at the shoe department
- c) at the cafe d)at the book department

22. What is the Russian for “solution”?

- a) раствор b) настойка
- c) инъекция d) отвар - кайнатылган даары

23. Translate: “Принимайте микстуру от кашля два раза в день.”

- a) Take cough mixtures twice a day. b) Swallow cough tablets three times a day
- c) Put nasal drops ones a day d) Take cough mixtures twice a month.

24. “adhesive plaster” means

- a) лейкопластырь b) бинт c) грелка d) пипетка

25. “to give an enema” means

- a) делать клизму b) наполнять грелку c) делать инъекцию d) готовить отвар

26. What is the English for “болеутоляющее”?

- a) painkiller b) laxatives c) sedatives d) sleeping draught

27. У вас болит голова. Что следует сказать в таком случае?

- a) I have a headache b) I have a toothache
- c) I have an earache d) I have a stomachache

28. Say in English: “доктор выпишет рецепт” - “доктур рецепт жазып берет”

- a) the doctor writes a prescription b) the doctor writes a letter
- c) at nurse writes a prescription d) the patient writes a prescription

29. Good exercises ... your muscles and give you ... .

- a) strong, formation b) love, good manners
- c) characters, muscle d) develop, pleasure

30. What means the international word «SOS»?

- a) Save Our Souls b) Safety Our Souls
- c) Sends Our Souls d) Salts Our Souls

31. Never ... .. when you have a cold.

- a) shake hand b) shake heads
- c) shake eyes d) shake legs

32. Influenza is a very ... ..

- a) infectious gripp b) infecsiionnyi bolesn
- c) not infectious disease d) infectious disease

33. When you give the first aid you must ... .. and ... ..

- a) be delirium, go away b) be fear, act with panic
- c) be calm, act without panic d) don't look, do not help

34. What is the English for the word «ушиб»?

- a) swollen b) bruise c) scratch d) bruised place

35. What color is the blood when it flows from an artery?

- a) it is dark red b) it is scarlet c) it is brown d) it is yellow

36. How do you help a person who lost his consciousness?

- a) I lay the person flat on his back b) I use a splint for the broken limb
- c) I sprinkle a warm water on his face d) I don't cover him warmly

37. Choose the right word combination «предотвратить распространение инфекции» .

- a) to prevent the diseases b) to stop infectious
- c) to stop bleeding d) to prevent the spread of infection

38. It is more important to your health to be ... .. than ... .. .

- a) a spectator, a sportsman b) a participant, a spectator
- c) a swimmer, a tennis d) a patient, a nurse

39. Good exercises ... your muscles and give you ... .

- a) strong, formation b) love, good manners
- c) characters, muscle d) develop, pleasure

40. What is the English for the word «каталка».

- a) chair b) car chair c) wheel chair d) katalka

### **Формируемая компетенция – ОПК-7**

*Circle the letter of the answer that corresponds to the following question.*

1. Ground Fault Circuit Interrupter. Protects people from being electrocuted.

- A. Respirator
- B. GFCI
- C. Grounded
- D. Fire Extinguisher

2. A shield to protect people from dangerous parts of a tool or machine.

- A. OSHA
- B. GFCI
- C. Guard
- D. PPE

3. Occupational Safety and Health Administration. Government agency that makes rules for shop safety.

- A. OSHA
- B. Grounded
- C. Hard Hat
- D. Guard

4. Safely connected to a neutral body, such as earth, which can absorb a stray electrical charge.

- A. Safety Glasses
- B. PPE
- C. Grounded
- D. Fire Extinguisher

5. Small plugs that fit into ear to protect hearing.

- A. Ear Plugs
- B. Hard Hat
- C. Fire Extinguisher
- D. Grounded

6. Safety Glasses

- A. Ground Fault Circuit Interrupter. Protects people from being electrocuted.
- B. Eye glasses that have been made strong to protect eyes when using power tools.
- C. A shield to protect people from dangerous parts of a tool or machine.
- D. Occupational Safety and Health Administration. Government agency that makes rules for shop safety.

7. Respirator

- A. Protective head covering.
- B. Small plugs that fit into ear to protect hearing.
- C. A breathing device worn to prevent inhaling hazardous materials.
- D. Personal protective equipment such as safety glasses or ear plugs.

8. Fire Extinguisher

- A. Occupational Safety and Health Administration. Government agency that makes rules for shop safety.
- B. Small plugs that fit into ear to protect hearing.
- C. Occupational Safety and Health Administration. Government agency that makes rules for shop safety.
- D. A device that uses a rapid spray of chemicals to put out small fires.

9. PPE

- A. Safely connected to a neutral body, such as earth, which can absorb a stray electrical charge.
- B. Protective head covering.
- C. Small plugs that fit into ear to protect hearing.
- D. Personal protective equipment such as safety glasses or ear plugs.

10. Hard Hat

- A shield to protect people from dangerous parts of a tool or machine.
- B. Personal protective equipment such as safety glasses or ear plugs.
- C. Eye glasses that have been made strong to protect eyes when using power tools.
- D. Protective head covering.

*Choose the correct answer for each question. One answer only.*

1. What would immediately be used if your clothing caught fire or if a large chemical spill had occurred on your clothing?
  - a. Fire extinguisher
  - b. Safety shower
  - c. Laboratory sinks
  - d. Eye-wash fountain
  
2. What should be done if a chemical gets in the eye(s)?
  - a. Use the safety shower
  - b. Immediately put your safety goggles on
  - c. Immediately begin rinsing the eye(s) in the eye wash station
  - d. Nothing, unless the chemical causes discomfort
  
3. What does PPE mean?
  - a. Personal Protective Equipment
  - b. Proper Protective Procedures
  - c. Proper Personal Equipment
  - d. Proper Procedures for Equipment

4. Class A fire extinguishers are suitable for:
  - a. Fire involving electrical equipment
  - b. Fire involving flammable liquids, such as petrol, oil, and diesel
  - c. Fire involving ordinary combustibles, such as wood, paper, and fabric
  - d. Fire involving flammable metals, such as aluminium, magnesium, and sodium
  
5. If the following symbol is depicted on a label, the material found in the container is:
  - a. Corrosive
  - b. Dangerously reactive
  - c. Irritant
  - d. Poisonous
  
6. Which item should not be found in a typical first aid kit?
  - a. Plasters
  - b. Prescription drugs
  - c. Bandage
  - d. Antiseptic wipes
  
7. What does the following symbol mean?
  - a. Flammable
  - b. Oxidizer
  - c. Explosive
  - d. Compressed Gas
  
8. Which type of fire extinguisher should NOT be used on a fire involving electrical equipment such as computers?
  - a. Foam
  - b. Water
  - c. Dry chemical/powder
  - d. CO<sub>2</sub>
  
9. Watch the video <https://www.youtube.com/watch?v=e7VkJuiT1kU> and do the quiz given below.
  1. When is it OK to eat or drink at the lab tables?
    - a. Always
    - b. During group work, but not during lab activities
    - c. Never
    - d. During lab activities



10. During lab activities you should always wear
- Goggles
  - An apron
  - Goggles and an apron
  - Just normal clothing
11. When should you use the shower in the back corner of the lab?
- After the work in the laboratory
  - After spilling chemicals onto your body
  - Before going out on a date
  - Never
12. What should you do if you break glass in the lab?
- Tell the teacher, sweep up the glass, and put it where the teacher directs you
  - Tell the teacher, sweep up the glass, and dump it into the garbage
  - Pick up the glass with your hands
  - Ignore it; the teacher will clean it up
13. You should tie back long hair or baggy clothing
- When working with chemicals
  - When working with a Bunsen burner
  - When doing dissections
  - Any time you are working in the lab
14. Why should you clean all materials after working in the lab?
- Chemical residue left on the materials may affect later experiments or cause a chemical reaction
  - Dirty glassware may start to smell bad
  - Some chemicals we use in labs may slowly dissolve glass, and if you leave them long enough holes will actually form
  - You actually don't need to wash your materials after lab as long as you remember to do it before lab next time.
15. You notice a beaker half full of a leftover powdered chemical and you are pretty sure you know which chemical it is. You should
- Ask the teacher what to do with the chemical
  - Pour the chemical back into the container you think it came from
  - Pour the chemical into the garbage can
  - Pour the chemical down the drain with the water running

16. You come into the classroom and smell gas. You discover one of the gas lines was left open by the previous class. You should

- a. Ignore it
- b. Light the burner because you will need it for lab today
- c. Evacuate the room immediately
- d. Shut off the gas and tell the teacher

17. Your lab partner spills a test tube of something (you're not quite sure what) onto a Bunsen burner and it catches fire on your lab table. You should

- a. Quickly fill a beaker with water and dump it onto the fire to put it out
- b. Tell the teacher and use the fire extinguisher
- c. Take a selfie with the fire in the background
- d. Try to blow out the fire since it isn't very big.

18. When should spills in the laboratory be wiped up?

- a. Immediately
- b. Within 2 minutes.
- c. Within 5 minutes.
- d. Never—someone else will do it.

19. Always point the open end of a test tube

- a. toward yourself
- b. toward your lab partner
- c. toward another classmate
- d. away from people

20. Long hair in the laboratory must be

- a. cut short
- b. held away from the experiment with one hand
- c. tied back with a hair band

21. Personal glasses provide as much protection as

- a. a face shield
- b. safety glasses
- c. splash proof chemical goggles
- d. none

22. After completing an experiment, all chemical wastes should be

- a. taken home
- b. disposed of according to the teacher's instructions
- c. dumped in the sink
- d. left at your lab station for the next class

23. When gathering glassware and equipment for an experiment, you should

- a. check your materials list for what is needed
- b. examine all glassware for chips or cracks
- c. clean any glassware that appears dirty
- d. All

24. You must follow all instructions, written and verbal, about the laboratory procedures given by the teacher.

- a. True
- b. False

25. Horseplay, jokes, and pranks are appropriate in the science classroom at any time.

- a. True
- b. False

26. Part of lab safety includes reading the lab procedure

- a. before doing the lab
- b. while doing the lab
- c. after doing the lab
- d. only if you think you really need it

27. How long should you wash your eyes when you have spilled chemicals in your eyes?

- a. 30 min
- b. 15 min
- c. 20 min
- d. 5 min

## 4.2. Задания для собеседования

### Формируемая компетенция – УК-4.

*Read and translate the text.*

#### **Pharmaceutical science**

Pharmacy as a science deals with medical substances. It treats not only of medicines but of their composition, analysis, combination and standardization. The word «pharmacy» is also used to designate the place where medicines are compounded, dispensed and sold. The title «pharmacist» refers to a person who demonstrates that he is scientifically and professionally able to work in the practice of pharmacy. The composition of medicines usually requires the scientific combination of two or more ingredients as prescribed by a physician. It demands special knowledge, experience and high professional standards. Pharmaceutical students learn different subjects, such as physics, chemistry, botany, pharmacognosy, etc.

Chemistry is that science which explains the structure of matter and the transformations which it undergoes. Botany treats of plants with reference to their compositions, functions, and classification. Pharmacognosy is the science which embraces the history, source, cultivation, collection, preparation, distribution, identification, composition, purification and preservation of drugs of vegetable and animal origin. Pharmacology is broadly defined as the science of drugs. A pharmacopoeia is a book containing a list of medicinal substances with their description, tests and formulas. The pharmacopoeial names of chemical substances do not always represent their chemical composition. The official description usually includes the physical properties of the drug, such as colour, crystalline and other forms, odour, taste and the result of exposure to air.

**Задание 1.** Найдите в тексте и выпишите с транскрипцией и переводом:

1. существительные, производные от глаголов: to preserve, to distribute, to classify, to transform, to cultivate, to compose, to prepare, to collect, to combine, to purify;
2. прилагательные, производные от существительных: pharmacy, medicine, chemistry, science, physics, plant, source, collection, preparation, distribution;
3. глаголы, производные от существительных: prescription, definition, treatment, usage, compound, reference, sale, requirement, container, demonstration;

4. наречия - производные от прилагательных: scientific, professional, broad, usual.

**Задание 2.** Переведите слова и словосочетания из текста.

трактовать (говорить) о; контакт с воздухом; отражать состав; иметь дело с; в связи с; иметь отношение к ; животного происхождения; предписывать врачом; подвергаться.

**Задание 3.** Преобразуйте предложения в пассивную форму и переведите.

1. Pharmaceutical students learn different subjects
2. Chemistry explains the structure of matter and its transformations.
3. Pharmacognosy embraces the history, source, cultivation and preservation of drugs of different origin.

**Задание 4.** Поставьте к предложениям общий вопрос и дайте два кратких ответа (положительный и отрицательный).

1. Pharmacy as a science deals with medicinal substances.
2. He is scientifically and professionally capable to work in the practice of pharmacy.
3. The compositions of medicines require the scientific combination of two or more ingredients.
4. We demanded special knowledge and high professional standards.
5. Pharmacology is broadly defined as the science of drugs.

**Задание 5.** Дайте ответы на английском языке.

1. What does pharmacy treat of?
2. Who learns physics, chemistry, botany, pharmacology, etc.?
3. Whom does the title «pharmacist» refer to ?
4. Preservation of what kind of drugs does pharmacology embrace?
5. How is pharmacology defined?
6. What type of science is chemistry?
7. How many ingredients of scientific combination does the composition of medicines require?
8. Where is pharmacist capable to work?
9. How often do the pharmacopoeial names of chemical substances represent their chemical composition?
10. Whom is the composition of medicines prescribed by?

*Read and translate the text.*

### **Extraction of drugs**

The active constituents of drugs are separated from the inert tissue of the plant by the simple process of collecting and expressing the juice from the fresh plant material. Although more and more components of plants are being prepared synthetically now, one knows that isolating from natural sources remains the easiest and the cheapest method of preparation. Moreover it became very modern and actual one in contemporary medicine.

It is generally accepted that sucrose is often obtained from the sugar beet. The first stage of extracting is a diffusion process. The beet is being cut into shreds and extracted by water at 78 to 80 C in a battery of diffusers for some hours. It is important to note that the diffusers are arranged so that the shredded beet passes from a liquid containing less sugar and finally to purified water as quick as possible. For some time the juice is being heated to higher temperature from 80 to 90 C and treated with lime. It is believed that under such conditions it coagulates and absorbs much more colloidal impurities and better neutralizes free acids. After passing carbon dioxide and filtering the treated juice is further purified by passing through sulphur dioxide and filtration. The concentration is now done at a much lower temperature. Then it is necessary to evaporate the filtrate under reduced pressure to a thicker juice. This one reaches the highest saturation or graining point. At this stage of extracting the semi – crystalline mass of sucrose crystals passes to a centrifuge where the mother liquid is separated and the obtained crystals are washed with a little water. The sugar is further cooled, dried and screened.

**Задание 1.** Переведите слова и словосочетания из текста.

естественный источник; хотя; диффузионная батарея; маточная жидкость; точка зернистости; процесс диффузии; при таких условиях; в конечном итоге; сахар просеивается.

**Задание 2.** Выпишите из текста все случаи употребления герундия, переведите.

**Задание 3.** Составьте собственные предложения, закончив следующие конструкции, и переведите.

1. One knows that ...
2. It is generally accepted that ...

3. It is important ...
4. It is believed that ...
5. It is necessary ...

**Задание 4.** Выпишите из текста все предложения со словом «one(s)» и укажите его функцию.

**Задание 5.** Дайте ответы на английском языке.

1. How is sucrose obtained?
2. What does the process of drug extraction consist in?
3. Where is the beet being cut into shreds and extracted by water?
4. What method of drug preparation became very modern and actual?
5. When is the treated juice purified by passing through sulphur dioxide?
6. How does the shredded beet pass from a liquid and finally to purified water?
7. What is necessary to do under reduced pressure?
8. How long is the juice heated and treated with lime?
9. Where does the mass of sucrose crystals pass at the last stage of extracting?
10. How much water are the obtained crystals washed with?

*Read and translate the text.*

### **Preparation of tablets**

One knows that a tablet is the most common form of medication for the administering of drugs in a dry state. Its preparation constitutes an important part of modern "Pharmaceutical Technology". The method of tablet making or tableting is defined as a process of pressure of powdered medicine.

It is generally observed that some tablets are made easier from certain drugs than from other ones. For example, sodium chloride is used without the addition of auxiliary substances. But for lactose the addition of such substances is necessary to overcome certain difficulties. It is interesting that in the process of tableting some materials are continuously binding and sticking in the special machine. Sticking takes place when there is too much moisture in the granules because of insufficient drying, etc.

The application of different pressure during tableting plays a very great role. It is important that tablets which are being dissolved slowly by saliva in the mouth are more strongly compressed than other ones using for common internal administration. Another important effect of higher pressures is an increase of friction which causes the use of greater amount of lubricating and gliding

substances, such as natural starch. The use of starch as an auxiliary component in tablet making is generally recognized. It was stated that starches possessed very good gliding properties and didn't show any lubricating action.

**Задание 1.** Определите части речи по суффиксам, переведите их. lubricate, powdery, pressure, medication, childhood, acidify, resistant, greatly, preparedness, creative, methodize, commonly, easeful, technician, whitish, effectuate, useless, lucky, generally, procession, insufficient, elemental, observer, generalize, economic, druggist, persistently, usage, realism, harden.

**Задание 2.** Переведите слова и словосочетания из текста. преодолевать определенные трудности; прилипание происходит; играть большую роль; натуральный крахмал; изготовление таблеток; непрерывно сцепляться и слипаться в специальной машине; смазывающие и скользящие вещества; усиление трения; общепризнанно; проявлять действие.

**Задание 3.** Составьте собственные предложения, закончив следующие конструкции, и переведите.

1. One knows that ...
2. It is generally observed that ...
3. It is interesting ...
4. It is important ...
5. It was stated that ...

**Задание 4.** Поставьте специальные вопросы ко всем членам следующих предложений.

For lactose the addition of such substances is necessary to overcome certain difficulties.

In the process of tableting materials are continuously binding in the special machine.

**Задание 5.** Дайте ответы на английском языке.

1. How is the method of tablet making defined?
2. What is the difference between the use of sodium chloride and lactose?
3. How many lubricating and gliding substances are used and where?
4. What properties did starches possess?



5. Where are some materials continuously binding and sticking?
6. What is tablet?
7. Why does sticking take place?
8. How are more strongly compressed tablets being dissolved in the mouth?
9. What plays a very important role in tablet making?
10. What can you tell about the use of starch in tableting?

*Read and translate the text.*

### **Shapes and sizes of tablets**

A great variety of shapes and sizes is available among medical tablets. One knows that the most common shape of the tablet is a circular body with flat or slightly convex sides. In the Scandinavian countries where the Pharmacopoeia provides official specification of formula, the method of tablet making, the size and shape are also specified officially. In selecting of particular shapes and sizes the primary consideration is ethical. It is generally recognized that prepared tablets must have a pleasing appearance. It is important that the tablet for making solutions is required to dissolve as quick as possible. This will require a larger diameter than average tablets of the same weight. A tablet for oral using should be flat and thick enough. While it is slowly dissolving in the mouth the patient will feel a pleasant lasting sense. The efficiency of the tablet depends on this effect.

Similarly, coated tablets which have a more convex shape are harder than other ones. It is more convenient to have the thinnest edges because it is easier to cover a thin edge during the coating process. In addition, it was found that preparing of very convex tablets was more difficult. The density of compressing substance is also important factor. Thus a lighter and less dense material needs a bigger punch – press machine than a similar weight of more dense material. In the process of tablet making different pressures are used for the compressing of various shapes of tablets. The flat-faced tablets show a relatively greater strength than the convex-shaped ones.

**Задание 1.** Определите части речи по суффиксам, переведите их.  
similar, officially, specify, realism, ethical, pleasure, relatively, various, appearance, shapeless, variety, available, slightly, specification, primary, recognize, preparedness, possible, solidify, requirement, thinnest, efficiency, materialize, insufficient, similarly, thickish, lighter, sensor, medicate, strengthen.

**Задание 2 .** Переведите слова и словосочетания из текста.

плоские таблетки; штамповочное устройство; таблетки, покрытые оболочкой; приятный внешний вид; таблетки для приготовления растворов должны растворяться быстро; продолжительное ощущение; иметь очень тонкие края; выпуклые таблетки; имеется в распоряжении большое разнообразие.

**Задание 3.** Составьте собственные предложения, закончив следующие конструкции, и переведите.

1. One knows that ...
2. It is generally observed that ...
3. It is interesting ...
4. It is important ...
5. It was stated that ...

**Задание 4.** Ко всем членам следующих предложений поставьте специальные вопросы.

In the Scandinavian countries the size and shape of tablets are specified officially. The flat-faced tablets show a relatively greater strength than the convex-shaped ones.

**Задание 5.** Дайте ответы на английском языке.

1. What is the primary consideration in selecting particular shapes and sizes of tablets?
2. Why is it more convenient to have the thinnest edges of tablets?
3. Where are the size and shape of tablets specified officially?
4. When will the patient feel a pleasant lasting sense?
5. What is the common shape of a tablet?
6. Why is the density of compressing substance also important factor?
7. Where are different pressures required?
8. What do convex-shaped tablets show?
9. How is the tablet for making solutions required to dissolve?
10. What does a lighter and less dense material need?

*Read and translate the text.*

### **Antibiotics**

Since the end of the twentieth century modern medicine has been making an extensive use of various antibiotics. It should be noted that antibiotics are powerful agents in combating infections. The problem of discovering new antibiotics can be most successfully solved at special research institutes which may have a small experimental plant producing preparations of new antibiotics.

Russia has several research institutes working in this field. Before new generation of antibiotics made its appearance Russian science had produced a series of new effective drugs, such as albomycin, etc. This practically non-toxic preparation has found wide application in the treatment of pneumonia in newborn and small children. It is also successfully used in obstetric and gynecological practice. Surgeons have to use it during the treatment of the septic processes caused by staphylococci which can resist other antibiotics. It has been established experimentally that the composition of its molecule includes iron and it has a peculiar mechanism of affecting the bacteria.

Mention must also be made of tetracyclines, such as chlortetracycline. It was introduced after chlorphenol had been discovered. Therefore chlortetracycline was considered the second broad – spectrum antibiotic developed for therapeutic purposes. It was isolated in 1948 from biomycin. Because of its yellow colour it was marked as auremycin. Another antibiotic of this series is tetracycline. It has been found that it possesses great advantages over its sister compounds. It may produce less toxic effect and penetrate the cerebrospinal fluid to a much greater extent. It has been stated that in ordinary use the tetracyclines can be given orally in doses of 250 mg.

**Задание 1.** Образуйте все возможные производные части речи от следующих слов и переведите.

medicine, use, various, note, power, infection, discovering, special, produce, success, preparation, appearance, effective, practically, application, treatment, surgeon, composition, mechanism, affect.

**Задание 2.** Переведите слова и словосочетания из текста.  
сильнодействующие средства; появляться; у новорожденных; применение; обладать; в борьбе с инфекционными заболеваниями; стафилококки; устойчивые к другим антибиотикам; антибиотик с широкой сферой действия; сложные соединения, близкие (родственные) по составу; иметь преимущества перед чем-либо; используемый для терапевтических целей.

**Задание 3.** Найдите в тексте предложения с модальными глаголами и их эквивалентами; поставьте к ним общий вопрос и дайте краткий ответ.

**Задание 4.** Найдите в тексте эквиваленты следующих предложений.

There are some scientific institutes acting in this branch in Russia.

It has been determined that it has preferences to its close compositions.

**Задание 5.** Дайте ответы на английском языке.

1. Where can the problem of discovering new antibiotics be solved?
2. What has been established experimentally?
3. When has modern medicine been making extensive use of various antibiotics?
4. What doses can the tetracyclines be given orally in ordinary use?
5. How many drugs had Russia produced before new generation of antibiotics made its appearance?
6. What are powerful agents in combating infections?
7. Which fields of medicine has non-toxic preparation found wide application in?
8. When was chlortetracycline isolated from biomycin?
9. Why was it marked as auremucin?
10. What advantages does tetracycline possess over its sister compounds?

**Формируемая компетенция – ОПК-7.**

*Read the text and choose the appropriate answer.*

### INCOMPATIBLE CHEMICALS

Being incompatible with each other, oxidizers (e.g. chromates, halogens, peroxides) and reducers (e.g. metals, metal hydrides, phosphorous, sulfur) should be stored in separate cabinets or on separate shelves. Accidental contact of incompatible chemicals can lead to fire, explosion and/or the release of highly toxic substances.

The magnitude of the problem usually increases with the quantity of chemicals being stored. Careful practice requires that incompatible chemicals involved should be stored in separate locations to minimize the risk of accidental mixing. Strong oxidizers should also be separated from flammable liquids.

## TOXICITY

A wide range of substances being kept in the chemical laboratory present a risk due to either chronic or acute toxicity; this includes the presence of carcinogens, mutagens and teratogens. Stated above toxic substances may enter the body by inhalation, absorption, ingestion and/or injection, appropriate protective measures must be taken to prevent exposure and where available, antidotes for poisons must be present. When using the poisons no food or drinks are to be consumed in laboratories under any circumstances. Containers/utensils having been used for the preparation or consumption of food or beverages must not be stored in the open in laboratories. Any woman who works in a laboratory where hazardous substances are in use and who is, or believes that she may be, pregnant must inform her supervisor.

1. What can accidental contact of incompatible chemicals lead to?
2. What does the degree of the problem concerning incompatible chemicals increase with?
3. What does the precautions practice connected with incompatible chemicals require?
4. How may toxic substances enter the body?
5. What must pregnant women do working in a lab where hazardous substances are in use?

**Найдите синонимичные пары.**

### **A day in the life of a medical student in India**

Being a medical student was always my dream. Two years ago, after clearing the entrance examination I secured a medical seat but it was far away from my hometown. In the beginning, I was a bit nervous about joining my medical college. But, to my surprise, I adjusted well here. We had our first professional exam at the beginning of this year and then we went home for a short break.

After a month-long holiday and enjoying my social life a bit, I came back to my hostel. In my room, I found an old timetable still hanging on the wall. That refreshed memories of my first professional examination. Indeed, that time was full of challenges, but fortunately, I passed my examination with distinction. Now, it has been more than a month since my second professional year has started. The addition of clinical posting has been the most exciting part of the timetable for the second year.

However, my daily routine has not changed much. I am someone whose brain stops working when the clock strikes 11 at night, a trait probably inherited from my father. I try to compensate for that by getting up early in the morning at 5:00am. I take a few sips of water and spend some time with the voluminous textbooks of pathology and pharmacology. Of course, sometimes I feel a little drowsy in the morning, but my timetable does not allow me to go back to bed.

At 6:30am when I am fully awake, my basal ganglia starts planning to get ready for the morning class. A daily routine of taking a bath, wearing the uniform, and packing the bag, goes on as usual. On the way to mess, I agree I may sometimes forget my ID card or lab coat in the room but running back to the hostel to get them is the real thrill in my life. I usually take a heavy breakfast complimenting it with a glass of milk in the morning, as standing in the ward throughout the day requires a good amount of energy.

By 8:00am I reach the classroom, with my mask flinging in the air, and not forgetting to put it back before stepping inside. The morning class is often on clinical subjects where time slots are allotted for medicine, surgery, obstetrics and gynaecology, and preventive and social medicine. These lectures give us an insight into the clinical approach to various disorders which is quite helpful when we go for our clinical rotation.

Usually, the morning lecture is over by 9:00 am and then we have our clinical postings. In the first month, I was posted in the Medicine Department along with two of my friends. The initial few days were quite overwhelming as we had never seen so many patients lying in the ward. But gradually we started interacting with them to learn the art of history taking. During the ward round, we were given a format of history taking with some instructions to follow. History taking is indeed a skillful task. It became even more of a task for me because I did not know the local language much. Here patients come from various cultures and backgrounds, and they speak the same language in different accents and tones. But my local friends helped me with it. Some patients love to talk to us in great detail, so much so that we could end up writing an entire book on their chief complaints, while some only prefer direct closed-ended questions. Once a week we were also posted in the outpatient department where opportunities for patient interaction were plenty, though time was limited. But, even in the short period of time, listening to the concern of the patient was most gratifying.

Slowly, I learned the importance of demographic details, history of presenting illness, and family history of the patient. I saw many cases of clinical medicine, but anaemia, dyspnoea, ascites, and valvular heart diseases fascinated me the most. One day we were even posted in the neurology ward, a specialty my father practices. Taking the history of patients with acute ischaemic stroke and

sudden onset paraplegia was nostalgic as it reminded me of all the in-house discussions I am so used to since my childhood. The faculty and residents posted in the ward were our teachers, but Hutchinson's textbook of clinical medicine was our 'Bible'.

The experience of my medicine posting can be summarised as:

By 9:20 you are in, with a white coat on, instruments in the pocket, excited to use them turn by turn. Doctors are busy in rounds, you have to wait, in the meantime, you can observe the patient's gait. An hour goes by while you finish the history in brief, every bit of the patient teaches you, even in his grief. The faculty is finally free and comes up with some new topic every day, to understand that, you have to read it the very same day.

My friends posted in other departments had a similar experience and they often shared their daily routines with me. The experience shared by my friends posted in Preventive and Social Medicine was unique as they got an opportunity to travel to nearby primary health centres. They got a chance to study the problems faced by people residing in remote areas and to find out ways to provide them with good healthcare facilities. It is great that our teaching curriculum gives early clinical exposure and this helps in developing empathy toward the patients.

After returning from my morning clinical posting, I rush to the mess to grab some food. Lunchtime is often used to catch up on the progress of the day and discuss the clinical experience with my friends. But we have to keep a close watch on the clock, as there is a lecture at 1:00pm at college. Everyone will agree that attending a class straight after lunch is so difficult. Taking notes in class helps me to stay awake and learn something from the lecture, which is very important.

At 2:00pm we have practical periods which are indeed more fun than lectures. In the Pathology lab, seeing gross specimens of different organs helps me understand how our body works in a well-coordinated manner. Exploring the different labs in the microbiology department is a unique experience. Additionally, every Saturday, we have training on the AETCOM (Attitude, Ethics, and Communication) module. This takes us through the major attributes of a physician and highlights the importance of empathy and ethics in medical practice.

The long day at college finally gets over at 4:00pm and I happily return to my room. With milk in a mug and some evening snacks, I sit along with my roommates and learn about their experiences of the day. Then we discuss assignments for the next day and plan out the topics to read. The evening routine usually varies with the degree of tiredness, but the only motivation is to learn something new for patient care. Every day I also spend some time indulging in physical activity like playing badminton or walking around while talking to my

parents on the phone. This is very important because as doctors we are role models for society and we have to stay fit to help our patients.

At around 6:00pm, I head straight to the library where I spend around 2-3 hours and try to revise my textbooks and prepare for any assignment on the next day. As medical students, we always have some seminar, group discussion, or test. By 9:00pm I come back to my hostel and have dinner with my friends. After dinner, all my roommates discuss different topics both academics and non-academics. The last hour of my daily routine is reserved for a video call to my parents and sister which gives me a detailed account of whatever is happening at my home. The day's activity finally comes to an end at 11:00pm when I place my books back on the rack, make my bed, and get ready to sleep.

The experience shared by me as a medical student may be different from that of other students. Medical life is a very relative experience and no two people would have the same experience. But, for me, the medical profession is a way of serving humanity and I thank God every day for allowing me to be a part of this noble profession.

#### SYNONYM MATCH:

- |                |                |
|----------------|----------------|
| 1. Sip         | a) sliding     |
| 2. Voluminous  | b) pleasant    |
| 3. Drowsy      | c) sleepy      |
| 4. Thrill      | d) appointment |
| 5. Flinging in | e) gulp        |
| 6. Slot        | f) point       |
| 7. Allotted    | g) highlited   |
| 8. Gratifying  | h) massive     |
| 9. Postings    | i) worry       |
| 10. Gait       | j) gaps        |

#### **Темы для собеседования.**

1. Speak about the development of a Pharmacy in Europe and Russia.
2. Speak about your Daily Routine as a Pharmacist Student.
3. Speak about your studies at the Pharmacy Faculty.
4. Speak about yourself as a student of a Pharmacy faculty.
5. Dwell upon the Yaroslavl State Medical University.
6. What is Pharmacy? Describe the chemical laboratory.
7. Speak about the chemist shop.