

MINISTRY OF HEALTH PROTECTION OF UKRAINE

ODESSA NATIONAL MEDICAL UNIVERSITY

Faculty: medical
Department of propaedeutics of internal diseases and therapy

CONFIRMED by

Rector for scientific and pedagogical work


Eduard BURIACHKIVSKYI

09/09/2024

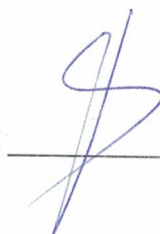
**METHODOLOGICAL DEVELOPMENT
TO THE INDEPENDENT WORK OF HIGHER EDUCATION
ACQUIRES FROM PRODUCTION PRACTICE**

Faculty, course: medical, 3
Educational discipline: Nursing practice

Approved:

Meeting of the department of propaedeutics of internal diseases and therapy
Protocol No. 1 dated August 27, 2024.

Head of the department



Olena YAKYMENKO

Authors:

Head of the department, Doctor in Medicine, Professor Yakimenko Olena

Doctor in Medicine, Associate Professor Sebov Denis

PhD of Medicine, Assistant Professor Oliynyk Dmytro

PhD of Medicine, Assistant Professor Maznichenko Iegor

Assistant Professor Zakrytov Denis

Topic: Moral and ethical legal principles of nursing in Ukraine. Organization of the work and duties of the nurse of the main structural divisions of the therapeutic hospital. Determination of the role and place of the nurse in the care of patients in the medical and diagnostic process, the concept of its structure and conditions. Moral, ethical and deontological principles of formation of a medical specialist. The main professional duties of secondary medical personnel in polyclinic and inpatient departments of the hospital. Principles of professional subordination in the doctor-nurse-junior medical staff system. The concept of medical and protective, sanitary and hospital regimes of a therapeutic hospital, the role of junior medical personnel in their provision.

Purpose: To demonstrate mastery of the basic principles of medical deontology. Demonstrate mastery of the principles of job instructions and current orders regulating the professional activity of a therapeutic nurse. Demonstrate mastery of the duties of a nurse in a therapeutic department.

Basic concepts: Deontology, therapeutic hospital, nurse, job description.

Equipment: Laptop with presentation, multimedia projector, individual tasks on the topic of practical training, job instructions.

Plan:

Question

1. Basic principles of medical deontology.
2. The content of job instructions and current orders regulating the professional activity of a nurse.
3. Responsibilities of the nurse of the therapeutic department.
4. Define welcome functions.
5. Make appropriate entries to the temperature sheet.
6. Master the methods of communication with the patient and relatives within the framework of medical deontology.

Approximate tasks for processing the theoretical material:

Compile a dictionary of basic concepts on the topic:

Term	Definition
Nurse	
Reception department	
Therapeutic department	
Job description	

2. Practical works (tasks) that will be performed during the lesson:

1 The main premises of the hospital reception room include:

- a) inspection rooms
- b) sanitary pass
- c) an isolator for housing patients with an undetermined diagnosis
- d) procedure rooms
- e) all of the above

2. In the reception room of the hospital, the following are carried out:

- a) preventive examinations of patients
- b) execution of scheduled operations
- c) sanitary treatment of patients
- d) transfer of duties by a nurse

3. Test tasks for self-control:

1. Monitoring of patients' compliance with the nutritional regime and internal rules is carried out by:

- A. doctor
- B. senior nurse
- C. nurse
- D. cloth nurse
- E. sister is the landlady

2 Ward nurse:

- A. Performs medical appointments for patients in her assigned wards
- B. Monitors the condition of patients
- C. Makes a departure for patients
- D. Organizes the nutrition of patients
- E. All of the above.

3. The following should accompany patients to clinical and diagnostic examinations:

- A. doctor
- B. senior nurse
- C. nurse
- D. cloth nurse

E. a relative of the patient

Standards of answers:

Task 1: D Task 2: E . Task 3: D

Main:

1. Propaedeutic of internal medicine: textbook / Y.I. Detsyk, O.G. Yavorsky, E.M. Neiko, etc.; edited by O.G. Yavorsky. - 6th ed., vypr. and additionally. - K.: VSV "Medicine", 2020. - 552 p. + 12 p. color.
2. Methods of objective examination in the clinic of internal diseases: textbook. possible / O.O. Yakymenko, O.E. Kravchuk, V.V. Klochko and others. - Odessa, 2013. - 154 p.
3. Diagnostic methods in the clinic of internal medicine: a textbook / A.S. Svintsitskyi. - K.: VSV "Medicine", 2019. - 1008 p. + 80 p. color.

Additional:

1. Method of examination of a therapeutic patient: textbook. posib. / S.M. Andreychyn, N.A. Bilkevych, T.Yu. Chernets. - Ternopil: TSMU, 2016. - 260 p.
2. Inquiry and physical examination of the patient of therapeutic profile: Textbook for students of III-IV courses of medical universities / V.E. Neiko, I.V. Tymkiv, M.V. Bliznyuk [et al: IFNMU, 2016. - 142 p.
3. Yepishyn A.V. Propaedeutic of internal diseases with care for therapeutic patients / AB. Yepishin K. - 2015. 768s.
4. Kovaleva OM. Propaedeutic of Internal Medicine/OM. Kovaleva, N.A. Safargalina-Kornilova // K.: Medicine 2010 - 750s.
5. Macleod's Clinical Examination / Ed. G.Douglas, F.Nicol, C.Robertson.- 13th ed.- Elsevier. 2013. - 471 p.
6. Bates' Guide to Physical Examination and History Taking / Ed. Lynn S. Bickley, Peter G. Szilagyi. - Wolters Kluwer, 2017. - 1066 p.

Electronic information resources

1. <http://moz.gov.ua> - Ministry of Health of Ukraine
2. www.ama-assn.org - American Medical Association
3. www.who.int - World Health Organization
4. www.dec.gov.ua/mtd/home/ - State Expert Center of the Ministry of Health of Ukraine
5. <http://bma.org.uk> - British Medical Association
6. www.gmc-uk.org - General Medical Council (GMC)
7. www.bundesaerztekammer.de - German Medical Association
8. <https://onmedu.edu.ua/>
9. <https://onmedu.edu.ua/kafedra/propedevtiki-vnutrishnih-hvorob-ta-terapii/>

Topic: Determination of vital functions of the patients' body: blood pressure measurement algorithm, pulse research technique, analysis of pulse properties, thermometry technique, research of external breathing functions. Rules for filling out the temperature sheet. Regulation of body temperature is normal. Methods of measuring body temperature. Registration on temperature sheets. Pulse, its definition. Vessels available for palpation. The main properties of the pulse (uniformity, rhythmicity, frequency, tension, filling) and the rules for their determination. Methodology of pulse research on radial arteries. Concept of pulse deficiency. Blood pressure and the rules of its measurement on the brachial artery. Basic rules

for determining breathing parameters: frequency, depth, type, rhythm of breathing. Rules for filling out the temperature sheet.

Purpose: To demonstrate mastery of determining vital signs and the ability to register in a temperature sheet. Rules for transferring shifts to the next shift. Thermometry, blood pressure measurement, respiratory rate calculation, pulse oximetry and pulse research with data entry on the temperature sheet.

Basic concepts: Blood pressure, pulse, respiratory rate, thermometry, temperature chart.

Equipment: Laptop with presentation, multimedia projector, individual tasks on the topic of the practical lesson, tonometer, pulse oximeter.

Plan:

1. Theoretical questions:

1. Conduct a pulse study and blood pressure measurement.
2. Peculiarities of deontology in the work of medical professionals with patients and their relatives.
3. Rules for filling out the medical documentation of the polyclinic and therapeutic hospital.
4. Measure body temperature and fill out a temperature sheet.
5. Calculate the frequency of breathing and fill in the temperature sheet.
6. The structure and principle of working with a list of medical prescriptions.

Questions for self-control:

Approximate tasks for processing the theoretical material:

Compile a dictionary of basic concepts on the topic:

Term	definition
Pulse	
Blood pressure	
Deontology	
Temperature sheet	

2. Practical works (tasks) that will be performed during the lesson:

1. State of consciousness of the patient Yu. 20l. treated as a comma. What is characteristic of this?
 - A. Preserved consciousness with preserved reflexes
 - B. Lack of consciousness and sharp suppression of reflexes

- S. A state of hibernation with preserved reflexes from which a patient can be brought out for a short time by a loud appeal
- D. Inhibition, poor orientation in the surrounding environment
- E. Preserved consciousness with sharp suppression of reflexes

2. A patient with left-sided croupous pneumonia took a forced position - lying on his right side. The forced position of the patient in bed should be understood as:

- A. The position recommended by the doctor for faster recovery
- B. The position taken by the patient under the influence of the progress of the disease
- S. A condition that the patient cannot change on his own
- D. The position that the patient takes to reduce the manifestations of the disease (shortness of breath, cough, pain, etc.)
- E. The position taken by the patient during immobilization of the limb (application of splints, splints, skeletal extension).

3. Test tasks for self-control:

1. Monitoring of patients' compliance with the nutritional regime and internal rules is carried out by:

- A. doctor
- B. senior nurse
- C. nurse
- D. cloth nurse
- E. sister is the landlady

2 Ward nurse:

- A. Performs medical appointments for patients in her assigned wards
- B. Monitors the condition of patients
- C. Makes a departure for patients
- D. Organizes the nutrition of patients
- E. All of the above.

3. Monitoring of patients' compliance with the nutritional regime and internal rules is carried out by:

- A. doctor
- B. senior nurse
- C. nurse
- D. cloth nurse
- E. sister is the landlady

4. Information about the patient's drug intolerance is entered in:

- A. title page of medical history
- B. list of medical appointments
- S. temperature sheet
- D. leaf of a person who left the hospital
- E.A.V.

5. A patient with an acute violation of cerebral blood circulation must follow an individual regimen:

- A. bed
- V. strict bed
- S. semi-bed
- D. general
- E. canvas

6 Ward nurse:

- A. Performs medical appointments for patients in her assigned wards
- B. Monitors the condition of patients
- C. Makes a departure for patients
- D. Organizes the nutrition of patients
- E. All of the above.

7. The following should accompany patients to clinical and diagnostic examinations:

- A. doctor
- B. senior nurse
- C. nurse
- D. cloth nurse
- E. a relative of the patient

Standards of answers:

Task 1: In . Task 2: D Task 3: D Task 4: A. Task 5: B.

Task 6: E . Task 7: D

Topic: Technique and algorithm of hygienic treatment of hands. Disinfection. Sterilization. Types and algorithm of various types of cleaning. Preparation of the manipulation cabinet. Definition of standards of asepsis and antiseptics. Disinfection methods and techniques. Types of sterilization, methods of assessing the quality of pre-sterilization cleaning and sterilization.

Rules and methods of preparation of the working surface of the manipulation nurse, preparation of the manipulation office at the beginning and at the end of working hours.

Purpose: To demonstrate mastery of the basic principles of hygienic hand treatment. Understanding the features of disinfection, sterilization in the conditions of a therapeutic hospital. Features of the manipulation cabinet. Rules and methods of preparation of the working surface of the manipulation nurse, preparation of the manipulation office at the beginning and at the end of working hours.

Basic concepts: Hygienic treatment of hands, disinfection, sterilization, asepsis and antiseptics, manipulation room.

Plan:

1. Theoretical questions:

To list the range of duties and actions of the manipulation nurse of the therapeutic department.

How to prepare a manipulation table for work.

List the main requirements for disinfection, pre-sterilization cleaning of instruments.

The technique of performing hand processing.

Questions for self-control:

To list the range of duties and actions of the manipulation nurse of the therapeutic department.

How to prepare a manipulation table for work.

List the main requirements for disinfection, pre-sterilization cleaning of instruments.

The technique of performing hand processing.

Approximate tasks for processing the theoretical material:

Compile a dictionary of basic concepts on the topic:

Term	Definition
Manipulation office	
Manipulative nurse	
Septic tank	
Aseptic	

2. Practical works (tasks) that will be performed during the lesson:

3. Test tasks for self-control:

1. So that sterile gastric probes do not dry out and do not crack, they are stored:

- A. In a 1% solution of boric acid.
- B. In a 0.5% chloramine solution.
- C. In 1% chloramine solution.
- D. In a 20% solution of boric acid.
- E. In a 3% solution of hydrogen peroxide.

2. What is the mechanism of action of chloramine solutions?

- A. Disinfectant.
- B. Detoxifying.
- C. Anti-inflammatory.
- D. Protinabryakovy.
- E. What burns

3. Disinfection is:

- A.- a set of measures to destroy vegetative forms of pathogenic and conditionally pathogenic microorganisms.
- B.- complete release of any substance or object from microorganisms by acting on it by physical factors.
- C.- complete release of any substance or object from microorganisms by acting on it with chemical factors.
- D.- complete liberation of any substance or object from microorganisms by mechanical means
- E. -wet cleaning

4. How many stages of pre-sterilization cleaning in different ways of multiple instruments are there?

- A. 6.
- B. 5.
- C. 2.
- D. 3.
- E. 4.

5. Who is the founder of nursing, the "mother of nursing"

- A. Mother Teresa
- W. Florence Nightingale
- S. Socrates
- D. Hippocrates
- E. Henderson

Standards of answers to solving tasks.

Task 1: A. Task 2: A. Task 3: A. Task 4: E. Task 5: B.

Topic: Technique of performing intradermal, subcutaneous, intramuscular, intravenous injections, intravenous drip infusions. Types and algorithm of catheter placement. Calculation of the dose of the soluble form of the drug for injection. Insulin administration technique. Techniques, algorithms for intradermal, subcutaneous, intramuscular, intravenous injections, intravenous drip infusions. Classification of catheters, algorithm for setting up a peripheral intravenous catheter. Methods of insulin administration, keeping medical records, places of insulin administration, side effects.

Purpose: To demonstrate the implementation of algorithms for intradermal, subcutaneous, intramuscular, intravenous injections, intravenous drip infusions. Peculiarities of working with a list of appointments and calculating the dose of medicinal products. Understanding the differences between different types of catheters.

Basic concepts: injection, catheter, appointment list, dose, route of drug administration, side effects.

Plan:

1. Theoretical questions:

Algorithm for performing intradermal injections

Algorithm for performing subcutaneous injections

Algorithm for performing intramuscular injections

Algorithm for performing intravenous injections

Injection execution algorithm

Algorithm for performing intravenous drip infusions

Side effects, possible with injections

Questions for self-control:

Algorithm for performing intradermal injections

Algorithm for performing subcutaneous injections

Algorithm for performing intramuscular injections

Algorithm for performing intravenous injections

Injection execution algorithm

Algorithm for performing intravenous drip infusions

Side effects, possible with injections

Approximate tasks for processing the theoretical material:

Compile a dictionary of basic concepts on the topic:

Term	Definition
Types of injections	
Adverse events with intravenous injection	
Side effects of IV injection	
Adverse events with p/sh injection	

2. Practical works (tasks) that will be performed during the lesson:

3. Test tasks for self-control:

.1. What is a possible complication when both walls of a vein are punctured during an intravenous injection?

1. Hematoma.
2. Necrosis.
3. Sepsis.
4. Thrombophlebitis.
5. Infiltrate.

2. Without finding out the allergic history, the patient was administered vitamin B6. After the injection, the patient experienced marked agitation, tightness in the chest, general redness of the skin, a coughing fit, deterioration of the breathing rhythm, and a decrease in blood pressure. What complication did the patient have?

1. Quincke's edema
2. Medicinal embolism
3. Allergic reaction
4. Collapse
5. Anaphylactic shock

3. After the administration of penicillin, the patient lost consciousness, the patient was pale, his breathing was shallow, his pulse was 100 beats. per minute, blood pressure 90/50 mm Hg. What are the tactics of the nurse on duty?

1. Apply an ice pack to the injection site
2. Enter prednisolone
3. Call the attending physician
4. Establish fresh air access

5. Introduce respiratory analeptics

4. For 5 days, the nurse administered a 25% solution of magnesium sulfate to the right upper-outer quadrant of the buttock to the patient M. for 5 days. Tonight, the patient turned to the nurse with complaints of unbearable pain at the injection site, the presence of a seal, and an increase in general and local body temperature. What complication occurred?

1. Hematoma.
2. Esophageal inflammation.
3. Sepsis.
4. Abscess.
5. Phlebitis.

5. After the intramuscular injection, on the second day, a feeling of pain, swelling, and hyperemia appeared at the site of drug administration. What complication occurred?

1. Drug embolism.
2. Allergic reaction.
3. Air embolism.
4. Tissue necrosis.
5. Infiltrate.

6. When a 10% calcium chloride solution was administered intravenously in the manipulation room, the 40-year-old patient M. developed a burning pain at the injection site, a bulge appeared around the vein. Name the complication that can arise in this situation.

1. Air embolism.
2. Fat embolism.
3. Tissue necrosis.
4. Allergic reaction.
5. Sepsis

7. During an intravenous injection, the nurse accidentally injected a 10% calcium chloride solution under the skin. How should the nurse act?

1. Inject 50–80 ml of 9% sodium chloride solution into the injection site.
2. Put a bubble with ice.
3. Stop the administration, apply a warming compress
4. Continue administration of 10% calcium chloride solution.
5. Put a tourniquet above the injection site.

8. Parenteral administration of drugs is:

1. Administration of drugs by injection.
2. Administration of the drug through the rectum.
3. Rubbing the ointment.
4. Administration of the drug through the mouth.
5. Application of powders

9 Complications of lipodystrophy occur in patients who receive injections for a long time:

1. Insulin.
2. Bicillin.
3. Gentamicin.
4. Vitamin B6.
5. Vitamin B1.

Reference answers: 1-1, 2 - 5, 3 - 3, 4 - 4, 5 - 5, 6 - 3, 7 - 3, 8 - 1, 9 - 1

Topic: Methodology and technique of blood and urine collection for general analysis of blood and urine. The method of urine collection according to the method of Amburge, Kakovsky-Addis and Nechiporenko. Methods of blood collection for biochemical and immunological studies. Method of using a glucometer. Rules for collecting urine and blood for various types of laboratory tests, rules for patient preparation and patient instruction. Assessment of laboratory indicators and their significance in the diagnostic process. Algorithm for determining blood glucose using a glucometer. Evaluation of the result. First aid for patients with hypoglycemic and hyperglycemic coma.

Purpose: To demonstrate mastery of the algorithm of urine collection according to the method of Amburger, Kakovsky-Addis and Nechiporenko, blood collection for biochemical and immunological studies, use of a glucometer

Basic concepts: blood sampling, urine sampling, urine collection according to the Amburger, Kakovsky-Addis and Nechiporenko method, monovet, glucometer

Plan:

1. Theoretical questions:

1. Algorithm of venous blood sampling
2. Algorithm of glucometry
3. Algorithm of urine collection according to the method of Amburge, Kakovsky-Addis and Nechiporenko
4. Tipi monovet
5. First aid for patients with hypoglycemic and hyperglycemic coma.

Questions for self-control:

Algorithm of venous blood sampling
Algorithm of glucometry

Algorithm of urine collection according to the method of Amburge, Kakovsky-Addis and Nechiporenko
Tipi monovet
First aid for patients with hypoglycemic and hyperglycemic coma.

Approximate tasks for processing the theoretical material:
Compile a dictionary of basic concepts on the topic:

Term	Definition
Taking venous blood	
Monowet	
Glucometry	
Urine collection	

2. Practical works (tasks) that will be performed during the lesson:

3. Test tasks for self-control:

1. In a healthy person, the need to urinate at night does not occur more than:

- A. 1 time
- B. 2 times
- C. 3 times
- D. 4 times
- E. does not occur at all

2. The patient was prescribed a general urinalysis in the nephrology department. Clinical analysis of morning urine can assess:

- A. Fluctuations in the relative density of urine
- B. Daily proteinuria
- C. The number of erythrocytes and leukocytes in the field of vision
- D. Daily glucosuria
- E. Nocturia

3A patient with acute glomerulonephritis saw a change in the color of urine in the form of "meat slops". What is associated with the appearance of this color of urine?

- A. Bladder inflammation

- B. Inflammation of the renal pelvis
- C. Inflammation of renal glomeruli
- D. Inflammation of the urethra
- E. Inflammation of the ureter

4 Spastic pains in the abdomen do not occur with defeat:

- A. Mesenteric vessels
- B. Pancreatic duct
- C. Intestines
- D. Stomach
- E. Bile-voiding ways

Standards of answers to solving tasks: Task 1: V.. Task 2: C. Task 3: C. Task 4: A.

Topic: Methods and technique of taking material for bacteriological research. Material collection algorithm for quick tests. Diagnostic value of laboratory tests. Algorithm for taking material from the pharynx cavity, nasal scraping, discharge from the ears. Preparation of the patient and the algorithm for taking urine and feces for bacteriological research.

Purpose: To demonstrate mastery of the algorithm for collecting urine and feces. the technique of bacterial swabs from the throat, rapid antigen tests. Algorithm for taking material from the pharynx cavity, nasal scraping, discharge from the ears.

Basic concepts: smear, stool analysis, urine analysis, test system

Plan

1. Theoretical questions:

Material collection algorithm for quick tests.

Diagnostic value of laboratory tests.

Algorithm for taking material from the pharynx cavity, nasal scraping, discharge from the ears.

Algorithm for taking secretions from the ears.

The algorithm for taking a nasal scraping.

Patient preparation and stool sampling algorithm for bacteriological research.

Patient preparation and urine collection algorithm for bacteriological research.

Questions for self-control:

Approximate tasks for processing the theoretical material:

Compile a dictionary of basic concepts on the topic:

Term	Definition
------	------------

Express antigen test	
Dab	
Stool collection	
Urine collection	

2. Practical works (tasks) that will be performed during the lesson:

3. Test tasks for self-control:

Tasks for checking the initial level of knowledge

Task 1:

1. What is the position of the patient during the enema?

- A. Knee-ulnar
- B. On the left side
- C. On the back with the legs brought to the stomach.
- D. On the right side
- E. On the stomach

Task 2.

An enema is

- A. water procedure, which is taken for hygienic, therapeutic and preventive purposes.
- B. introduction of drugs into the intestine
- C. Introduction of liquid into the lower part of the large intestine through the anus for therapeutic and diagnostic purposes.
- D. lavage of the gastrointestinal tract
- E. x-ray examination of the colon.

Task 3:

A colonoscopy was prescribed for the patient in the gastroenterology department. What enemas are performed before a diagnostic examination of the intestine?

- A. Maslyani
- B. Medicinal
- C. Hypertensive
- D. Nutrients
- E. Cleaning

Task 4:

Indications for an enema are:

- A. secured 1 day

- B. ineffective urges to defecate
- C. introduction of substances into the large intestine for diagnostic purposes.
- D. the need for gastric lavage
- E. duodenal sounding.

Task 5:

When are cleansing enemas done?

- A. On the eve of X-ray examination of chest organs
- B. before conducting irigoscopy
- C. with acute abdominal pain
- D. with acute flatulence, pain and ineffective urges to defecate
- E. before fibrogastroscopy

Standards of answers to solving tasks.

Task 1: B. Task 2: C. Task 3: E. Task 4: C. Task 5: B.

Preparation of patients and equipment for taking feces for helminth eggs, hidden roof, co-program. Rules for taking a urine analysis for research according to the methods of Zimnytskyi, Nechyporenko, Addis-Kakovskii, their diagnostic value.

Task 1

In a healthy person, taking into account the nature of the food, bowel emptying should occur no less often:

- A. 1 time in 6-12 hours
- B. 1 time in 24-48 hours
- C. 1 time in 56-72 years
- D. 2 times a week
- E. 1 time a week

Task 2

A healthy person has no more need to urinate during the night:

- A. 1 time
- B. 2 times
- C. 3 times
- D. 4 times
- E. does not occur at all

Task 3

A general urinalysis was prescribed to the patient in the nephrology department. Clinical analysis of morning urine can assess:

- A. Fluctuations in the relative density of urine
- B. Daily proteinuria
- C. The number of erythrocytes and leukocytes in the field of vision
- D. Daily glucosuria

E. Nocturia

Task 4

A patient with acute glomerulonephritis saw a change in the color of urine in the form of "meat slops." What is associated with the appearance of this color of urine?

- A. Bladder inflammation
- B. Inflammation of the renal pelvis
- C. Inflammation of renal glomeruli
- D. Inflammation of the urethra
- E. Inflammation of the ureter

Task 5

Spastic pains in the abdomen do not occur with defeat:

- A. Mesenteric vessels
- B. Pancreatic duct
- C. Intestines
- D. Stomach
- E. Biliary tract

Topic: Methodology and technique of electrocardiogram registration. Standard and additional leads. Analysis of the main elements of the electrocardiogram. Basic concepts of electrocardiographic research. Electrocardiogram registration technique using standard leads. Analysis of the main components of the electrocardiogram.

Purpose: To demonstrate mastery of the ECG recording method. Mastery of ECG analysis.

Basic concepts: electrocardiogram, electrocardiograph, standard and additional leads.

Plan

1. Theoretical questions:

1. What main waves and complexes form the normal ECG, describe them.
2. What does the P wave on the ECG show and what is its normal characteristic?
3. What does the P-Q segment show on the ECG and what is its normal characteristic?
4. What does the QRS complex on the ECG reflect and what is its normal characteristic?
5. What does the S-T segment show on the ECG and what is its normal characteristic?
6. What does the P wave on the ECG show and what is its normal characteristic?
7. What is the electrical axis of the heart, its characteristics in normal and pathological conditions.

8. How to evaluate the main rhythm driver on the ECG and count the number of heart contractions?

Questions for self-control:

Approximate tasks for processing the theoretical material:

Compile a dictionary of basic concepts on the topic:

Term	Definition
Electrocardiography	
Electrode	
Withdrawal	
Elements of ECG	

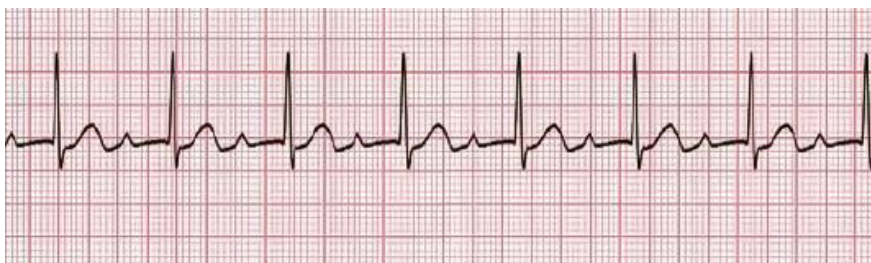
2. Practical works (tasks) that will be performed during the lesson:

1. Describe the following ECG:



- Migration of the supraventricular pacemaker
- Rhythm with AV coupling with simultaneous excitation of the atria and ventricles.
- Rhythm with AV coupling with preliminary excitation of the ventricles.
- Rhythm with AV coupling with prior excitation of the atria.
- Idioventricular rhythm.*

2. Describe the following ECG:



- Sinoatrial blockade,
- Atrioventricular blockade of the first degree,*
- Atrioventricular block II degree,
- Atrioventricular blockade of the III degree,

3. Test tasks for self-control:

1. *The P-Q interval is:*

- a. The time of passage of the impulse through the atria.
- b. Atrioventricular delay time.
- c. The time of passage of the impulse from the sinus node to the atrium.
- d. Time of passage of the pulse through the His system.
- e. *Time of passage of the impulse through the atria, atrioventricular node, His system to the working myocardium.*

2. *Normally, the P-Q interval is equal to:*

- a. 0.05-0.06 s.
- b. 0.08-0.09 s.
- c. 0.10-0.12 s.
- d. 0.07-0.14 s.
- e. *0.12-0.12 s.*

3. *What ECG interval is used to determine the frequency of heart impulses?*

- a. P-Q
- b. QRS
- c. QRST
- d. R-R
- e. P-P

4. *What element of the ECG shows the conduction of the impulse through the AV junction?*

- a. *Segment P-Q*
- b. R-T interval
- c. Zubets R
- d. Zubets T
- e. QRS complex

5. *Which element of the ECG reflects the conduction of the impulse along the legs of the bundle of His?*

- a. Segment P-Q
- b. P-Q interval
- c. Zubets R
- d. Zubets T
- e. *QRS complex*

6. *Which type of arrhythmia does not belong to a disorder of myocardial excitability?*

- +A. *Extrasystole*

- B. Sinus arrhythmia
- S. Sinus bradycardia
- D. His leg block
- E. Atrial fibrillation

Topic: Care of the seriously ill. Oral and nasal care, eyes. Prevention of bedsores. Prevention of congestion phenomena in the lungs in seriously ill patients. Technique of changing underwear and bed linen. Methods of treatment of the oral and nasal cavity. Preparation of solutions and tools for manipulations. Definition of the concept of bedsores, classification. Methods of prevention and treatment of bedsores. Techniques and types of respiratory gymnastics in seriously ill patients.

Purpose: To demonstrate mastery of the basic principles of care for critically ill patients. Methods of care for the oral and nasal cavity, eyes, prevention of bedsores, prevention of congestion in the lungs in seriously ill patients. Technique of changing underwear and bed linen

Basic concepts: Patient care, bedsores, position in bed.

Plan

1. Theoretical questions:

Care of the seriously ill.

Oral and nasal care, eyes.

Prevention of bedsores.

Prevention of congestion phenomena in the lungs in seriously ill patients.

Technique of changing underwear and bed linen.

Methods of treatment of the oral and nasal cavity.

Preparation of solutions and tools for manipulations.

Definition of the concept of bedsores, classification.

Methods of prevention and treatment of bedsores.

Techniques and types of respiratory gymnastics in seriously ill patients.

Questions for self-control:

Definition of seriously ill patient.

Methods of care for the oral and nasal cavity, eyes.

The mechanism of formation of bedsores.

Typical locations of bedsores.

Methods of prevention and care of bedsores.

Techniques and types of respiratory gymnastics in seriously ill patients.

Approximate tasks for processing the theoretical material:

Compile a dictionary of basic concepts on the topic:

Term	Definition
A seriously ill patient	
Bed-sore	
Prevention	

2. Practical works (tasks) that will be performed during the lesson:

3. Test tasks for self-control

1. Soporosis is:

1. The state of "stunning", in which the patient is poorly oriented in the surrounding situation, inhibited.

2. The state of "hibernation" from which the patient can leave for a short time with a loud appeal.

3. An unconscious state, which is characterized by a complete loss of reflexes and disorders of vital functions.

4. State of unconsciousness.

5. A state of delirium, hallucinations.

2. The patient is poorly oriented, answers questions slowly. This condition is called:

A. Stupor

V. Sopor

S. Coma

D. Collapse

E. Fainting

3. The patient is unconscious, does not answer questions, reflexes are not determined. This condition is called:

A. Stupor

V. Sopor

S. Coma

D. Collapse

E. Fainting

4. An active-forced position is:

1. The position that the patient can easily change, depending on his needs and wishes.
2. A position that the patient cannot change on his own.
5. The position that the patient changes independently in order to relieve pain.
4. The position that the patient is forced to occupy by the pathological process against his will.
5. The need for the patient to be constantly in bed.

7. The passive-forced position is:

1. The position that the patient can easily change, depending on his needs and wishes.
6. A position that the patient cannot change on his own.
3. The position that the patient changes independently in order to relieve pain.
4. The position that the patient is forced to occupy by the pathological process against his will.
5. The need for the patient to be constantly in bed.
7. The patient has a "proud" posture, the abdomen is enlarged. Under what conditions does it occur?

1. What is associated with a decrease in cerebral blood flow during fainting:

- A. Short-term spasm of cerebral vessels
- B. Short-term spasm of peripheral vessels
- C. Short-term expansion of cerebral vessels
- D. Short-term expansion of peripheral vessels

E. Long-term expansion of peripheral vessels

8. What is the pulse on the central arteries during clinical death:

A. Paroxysmal tachycardia

B. Bradycardia

S. Filamentous

D. Weak filling

E. Not determined

Topic: The technique of placing a nasogastric tube. Stomach lavage technique. Methodology of duodenal probing. Preparation of the necessary instruments and the patient for placing a nasogastric tube. The algorithm for placing a nasogastric probe. Indications and contraindications for gastric lavage. Stomach lavage technique. Indications and contraindications for gastroduodenal probing. Methodology and algorithm of duodenal probing.

Purpose: To demonstrate mastery of the algorithm for placing a nasogastric tube, gastric lavage, and gastroduodenal probing.

Basic concepts: Hygienic treatment of hands, disinfection, sterilization, asepsis and antiseptics, manipulation room, probe, preparation for the procedure.

Plan

1. Theoretical questions:

Demonstrate mastery of the algorithm for placing a nasogastric tube

Gastric lavage algorithm,

Algorithm of gastroduodenal probing.

Questions for self-control:

Preparation of the patient for nasogastric probes.

Stomach lavage technique.

Preparation of the necessary tools for placing a nasogastric tube

The algorithm for placing a nasogastric probe.

Indications and contraindications for gastric lavage.

Stomach lavage technique.

Indications and contraindications for gastroduodenal probing.

Methodology and algorithm of duodenal probing.

Possible side effects during probing.

Approximate tasks for processing the theoretical material:

Compile a dictionary of basic concepts on the topic:

Term	Definition
Gastric lavage	
Gastroduodenal probing	
Parenteral nutrition	
Enteral feeding	

2. Practical works (tasks) that will be performed during the lesson:

1. Patient O., 35 years old, was admitted to the gastroenterology department - the doctor prescribed fractional probing of the stomach using a parenteral irritant (histamine). After inserting the probe at the distance from the incisors to the navel, the nurse sucked out the I, II, III portions of the stomach contents. What is the next stage of further actions of the nurse?

A * Administer subcutaneously a 1% solution of diphenhydramine - 1 ml

B Suction IV, V portions of gastric contents

C Aspirate IV, V, VI portions of gastric contents

D Suction IV, V, VI, VII portions of gastric contents

E Administer subcutaneously a 0.1% solution of histamine

An enema is used to wash the intestines in a patient with chronic renal failure:

A * Siphon

B I will clean

C Hypertensive

D Oleinu

E emulsion

3. Test tasks for self-control:

1. So that sterile gastric probes do not dry out and do not crack, they are stored:

A. In a 1% solution of boric acid.

B. In a 0.5% chloramine solution.

C. In 1% chloramine solution.

D. In a 20% solution of boric acid.

E. In a 3% solution of hydrogen peroxide.

2. What is the mechanism of action of chloramine solutions?

- A. Disinfectant.
- B. Detoxifying.
- C. Anti-inflammatory.
- D. Protinabryakovy.
- E. What burns

3. Disinfection is:

- A.- a set of measures to destroy vegetative forms of pathogenic and conditionally pathogenic microorganisms.
- B.- complete release of any substance or object from microorganisms by acting on it by physical factors.
- C.- complete liberation of any substance or object from microorganisms by acting on it with chemical factors.
- D.- complete release of any substance or object from microorganisms by mechanical means
- E. -wet cleaning

4. How many stages of pre-sterilization cleaning in different ways of multiple instruments are there?

- A. 6.
- B. 5.
- C. 2.
- D. 3.
- E. 4.

5. Who is the founder of nursing, the "mother of nursing"

- A. Mother Teresa
- W. Florence Nightingale
- S. Socrates
- D. Hippocrates
- E. Henderson

Standards of answers to solving tasks.

Task 1: A. Task 2: A. Task 3: A. Task 4: E. Task 5: B.

Topic: Patient preparation for instrumental research methods. Algorithm for performing various types of enemas. Algorithm of gas discharge tube application. Bladder catheterization. Methods of instrumental research of patients in a therapeutic hospital. The technique of

preparing patients for ultrasound examination of organs of the abdominal cavity and kidneys, colonoscopy, fibrogastroduodenoscopy, irigoscopy. rectoromanoscopy, bronchoscopy.

Purpose: To demonstrate mastery of the algorithm for setting up various types of enemas, the use of a gas tube, catheterization of the urinary bladder. patient preparation for instrumental research methods.

Basic concepts: Hygienic treatment of hands, disinfection, sterilization, asepsis and antiseptics, manipulation room, instrumental methods of examination.

1. Theoretical questions:

Patient preparation for instrumental research methods.

Algorithm for performing various types of enemas.

Algorithm of gas discharge tube application.

Bladder catheterization.

Methods of instrumental research of patients in a therapeutic hospital.

The technique of preparing patients for ultrasound examination of organs of the abdominal cavity and kidneys, colonoscopy, fibrogastroduodenoscopy, irigoscopy. rectoromanoscopy, bronchoscopy.

Questions for self-control:

Patient preparation for instrumental research methods.

Algorithm for performing various types of enemas.

Algorithm of gas discharge tube application.

Bladder catheterization.

Methods of instrumental research of patients in a therapeutic hospital.

The technique of preparing patients for ultrasound examination of organs of the abdominal cavity and kidneys

The technique of preparing patients for colonoscopy,

The technique of preparing patients for fibrogastroduodenoscopy,

The technique of preparing patients for irigoscopy. sigmoidoscopy,

The technique of preparing patients for bronchoscopy.

Approximate tasks for processing the theoretical material:

Compile a dictionary of basic concepts on the topic:

Term	Definition
Enema	

Materialization of the bladder	
Instrumental research methods	

2. Practical works (tasks) that will be performed during the lesson:

3. Test tasks for self-control:

1. The following enema is used to strengthen bowel movements:

1. I will clean
2. hypertensive
3. emulsion
4. siphon

2. After an oil enema, the bowels are released mainly through:

1. 5-7 min
2. 30 min
3. 1-2 year
4. 10-12 year

3. How much water is needed for a siphon enema:

1. 1 l
2. 1.5 l
3. 2 l
4. 3 l
5. 10-12 l

4. Indications for the appointment of a gas outlet tube:

1. fasten
2. intestinal obstruction
3. drug poisoning
4. flatulence

5. Name the contraindications for using a cleansing enema:

1. inflammatory diseases
2. rectum
3. preparation for endoscopic colonoscopy
4. preparation for surgery
5. poisoning and intoxication constipation

6. What measures should be taken in case of flatulence?

1. gastric lavage
2. introduction of the gas outlet tube with
3. use of painkillers

7. The amount and temperature of liquid according to relaxing enemas:

1. 1-1.5 l ; 20-25°C

2. 10 l, above 40°C
3. 100-200 ml, 37-38°C
4. 500 ml, 20-30°C
5. 1-1.5 l; 37-38°C

8 How far should the gas removal tube be inserted into the colon:

1. 20 cm
2. 15 cm
3. 7 cm
4. 25 cm

9. In order to prepare for X-ray examination of the intestine, the patient is prescribed a cleansing enema. What position should be given to the patient during a cleansing enema:

1. half-lying on the right side, legs bent at the knees
2. on the back
3. on the stomach
4. on the left side, legs bent at the knee joints and brought to the stomach

Topic: Principles and standard of medical triage of the wounded and victims. Algorithm and technique of temporary stopping of arterial, venous and capillary bleeding. Standards of transportation and transfer of patients. Standards, principles of medical triage of victims. Types of bleeding. technique of stopping arterial, venous and capillary bleeding. Standards of transportation and transfer of patients.

Purpose: To demonstrate mastery of the basic principles of medical triage of the wounded and victims. Determination of types of bleeding, standards of transportation and transfer of patients. Understanding algorithms and techniques for temporary stopping of arterial, venous and capillary bleeding.

Basic concepts: medical triage, bleeding, stopping bleeding.

Plan:

1. Theoretical questions:

Principles of medical triage of the wounded and victims.

Algorithm of temporary arterial stop

Algorithm of temporary stoppage of venous bleeding.

Algorithm of temporary stoppage of capillary bleeding.

Standards of transportation and transfer of patients.

Standards, principles of medical triage of victims.

Questions for self-control:

Principles and standard of medical triage of the wounded and victims.

Algorithm and technique of temporary stopping of arterial, venous and capillary bleeding.

Standards of transportation and transfer of patients.

Standards, principles of medical triage of victims.

Types of bleeding. technique of stopping arterial, venous and capillary bleeding.

Standards of transportation and transfer of patients.

Approximate tasks for processing the theoretical material:

Compile a dictionary of basic concepts on the topic:

Term	Definition
Bleeding	
Temporary stoppage of bleeding	
Transportation of patients	

2. Practical works (tasks) that will be performed during the lesson:

3. Test tasks for self-control:

1. Specify the first medical aid for bleeding from the large arterial vessels of the limb:

- A. Placing a tourniquet on the limb above the place of damage
- B. Placing a tourniquet on the limb below the point of damage
- C. Applying a pressure bandage to the wound
- D. Placing a vascular suture
- E. Applying an occlusive dressing

2. Specify the methods of temporarily stopping arterial bleeding from a wound in the middle third of the forearm

- A. Finger compression of the radial artery
- B. Application of a hemostatic tourniquet below the site of damage
- C. Maximum flexion of the limb in the elbow joint
- D. Elevated position of the upper limb

3. Which bleeding is usually not accompanied by significant blood loss?
- A. Arterial
 - B. Parenchymatous
 - C. Capillary
 - D. Venous
4. Specify the methods of temporary stopping of venous bleeding from a leg wound:
- A. Finger compression of the femoral artery
 - B. Application of a hemostatic tourniquet above the site of damage
 - C. Applying a compression bandage to the wound
 - D. Maximum flexion of the limb in the hip and knee joints
5. Indicate which position should be given to the victim in case of nosebleeds:
- A. Sitting with head thrown back
 - B. Sitting, bent his head forward
 - C. Lying on your back
 - D. Lying on the side
 - E. Lying on your back with your legs up
6. Specify the characteristic signs of pulmonary bleeding:
- A. Vomiting with dark red blood
 - B. Vomit the color of coffee grounds
 - C. Tar-like stool
 - D. Coughing up foamy sputum of bright red color

E. Coughing up red blood

7. Specify the method of temporary stopping of bleeding:

A. Finger compression of the vessel in the wound

B. Vascular ligation

C. Vascular embolization

D. Suturing of a vessel

E. Applying a clamp to a bleeding vessel

8. Indicate on which area in relation to the wound a hemostatic tourniquet is applied:

A. Directly on the wound

B. On the wound, placing an aseptic bandage under the tourniquet

C. Proximal to the wound as close as possible to it

D. Distal from the wound as close as possible to it

9. Select first aid measures for internal bleeding:

A. Placing a tourniquet

B. Applying cold

C. Finger compression of the vessel

D. Applying a pressure bandage

E. Maximum flexion of the limb

Topic: Terminal states. Cardiopulmonary resuscitation (CPR). Concepts and types of terminal state (death). Signs of clinical and biological death. Rules for handling a corpse. Cardiopulmonary resuscitation (CPR), principles and standards of assessment of vital functions and performance of CPR.

Purpose: Determination of terminal states and their classification. Demonstrate proficiency in CPR. Understanding the features of clinical and biological death. Rules for handling a corpse. Study of the principles and standards of assessment of salutary functions and implementation of SAV.

Basic concepts: Cardiopulmonary resuscitation (CPR), terminal condition, clinical and biological death

Plan:

1. Theoretical questions:

Determination of terminal states

Classification of terminal states.

SLR.

Features of clinical and biological death.

Rules for handling a corpse.

Study of the principles and standards of assessment of salutary functions and implementation of SAV.

Questions for self-control:

Types of terminal states

Differences between clinical and biological death

CPR technique

Terminal states.

Cardiopulmonary resuscitation (CPR).

Classification of terminal states

Signs of clinical and biological death.

Rules for handling a corpse.

Cardiopulmonary resuscitation (CPR), principles and standards of assessment of vital functions and performance of CPR.

Approximate tasks for processing the theoretical material:

Compile a dictionary of basic concepts on the topic:

Term	Definition
Terminal condition	
SLR	

Clinical death	
Biological death	

2. Practical works (tasks) that will be performed during the lesson:

Task 1.

Patient O, 49 years old, is in the therapeutic department, he has an attack of bronchial asthma, cyanosis of the skin, shortness of breath at rest up to 35 respiratory movements per minute. What should be the actions of the nurse?

Task 2

Due to the pathology of the respiratory system and severe respiratory failure, the doctor prescribed oxygen therapy to patient S. What percentage of oxygen should be in the inhaled mixture?

Task 3

During physiotherapeutic procedures, the patient began to complain of weakness, dizziness, and severe shortness of breath. What should be the actions of the nurse in the situation?

3. Test tasks for self-control:

1. The most effective method of oxygen therapy:

- A. Delivery of oxygen from an oxygen pillow
- B. Supply of oxygen through nasal catheters
- C. Providing oxygen through a mask
- D. Delivery of oxygen through a ventilator
- E. Hyperbaric oxygenation, or oxygen barotherapy

2. What is the Bobrov apparatus used for:

- A. To purify oxygen from impurities
- B. For oxygen hydration
- C. To create the necessary pressure
- D. For mixing oxygen with nitrogen
- E. For a clear percentage ratio of oxygen and carbon dioxide

3. Manifestations of biological death

- A. involuntary urination
- B. decreased reflexes
- C. dryness of the sclera and conjunctiva

- D. constricted pupil
 - E. a reversible process is possible after resuscitation measures
4. Oxygen therapy is:
- A. deep breathing of air
 - B. use of pure oxygen for breathing
 - C. active ventilation of the room
 - D. use of a special composition enriched with nitrogen
 - E. use of an oxygen mixture containing from 40 to 95% oxygen
5. Pure oxygen cannot be used for oxygen therapy due to:
- A. oppression of the respiratory center
 - B. burns of the respiratory tract
 - C. toxic effect on the body
 - D. convulsions, loss of consciousness
 - E. all of the above
6. Oxygen therapy is indicated:
- A. Acute and chronic respiratory failure is accompanied by cyanosis
 - B. a decrease in the partial pressure of oxygen in the blood
 - C. severe heart failure is accompanied by cyanosis
 - D. pronounced shortness of breath at rest
 - E. all of the above
7. Artificial respiration by the "mouth to mouth" method is carried out
- A. immediately when breathing stops
 - B. immediately when blood circulation stops
 - C. after artificial heart massage
 - D. after ensuring patency of the respiratory tract
 - E. within 7 minutes after clinical death.
8. Indirect heart massage is done when
- A. Sudden cessation of breathing and heart
 - B. Cardiac arrest after a penetrating chest wound
 - C. Cardiac arrest due to tamponade (rapid filling of the pericardium with fluid)
 - D. Slowing of heart contractions to 38 per minute
 - E. lack of consciousness
9. The effectiveness of indirect heart massage is observed by
- A. dilation of the pupil
 - B. pink skin
 - C. displacement of the sternum by 1-2 cm
 - D. the appearance of a pulse on the carotid artery
 - E. chest movements
10. The effectiveness of artificial heart massage is observed by

- A. dilation of the pupil
- B. skin pinkness
- C. displacement of the sternum by 1-2 cm
- D. the appearance of a pulse on the carotid artery
- E. chest movements

11. To what depth should the sternum move in an adult during indirect heart massage:

- A. 1-2 cm
- B. By 2-4 cm
- S. On 2-4 mm
- D. 4-6 cm
- E. It should not shift

12. What should be the ratio of breathing rate and chest compressions if there are two resuscitators:

- A. 1/20
- V. 20/1
- S. 1/5
- D. 5/1

Well, 1/10

13. What should be the ratio of breathing rate and chest compressions if the resuscitator is alone:

- A. 1/15
- V. 15/1
- S. 2/15
- D. 15/2

Topic: Technique of pulse oximetry. Oxygen therapy. Rules for using nebulizers and pocket inhalers. The main indicators of pulse oximetry. Reference values. Indications for oxygen therapy. The structure of Bobrov's apparatus. Safety techniques when working with oxygen. Indications and contraindications for inhalation. Types of nebulizers, technique of use.

Purpose: To demonstrate mastery of the basic principles of oxygen therapy. Mastering the method of pulse oximetry. knowledge of the structure of the Bobrov apparatus and safety techniques for working with oxygen.

Basic concepts: Hygienic treatment of hands, disinfection, sterilization, asepsis and antiseptics, manipulation room.

Plan:

1. Theoretical questions:

Acquaint applicants with the range of duties and actions of a manipulation nurse in a therapeutic department, the technique of hygienic hand washing, disinfection and sterilization.

Questions for self-control:

Technique of pulse oximetry

Definition of oxygen therapy.

Algorithm of nebulizer application.

Structure of the Bobrov apparatus.

Safety rules for working with oxygen.

Approximate tasks for processing the theoretical material:

Compile a dictionary of basic concepts on the topic:

Term	Definition
Pulse oximeter	
Saturation	
Oxygen therapy	
Nebulizer	

2. Practical works (tasks) that will be performed during the lesson:

Indications for oxygen therapy.

Pulse oximetry algorithm.

Structure of the beaver's apparatus

Patient O, 49 years old, is in the therapeutic department, he has an attack of bronchial asthma, cyanosis of the skin, shortness of breath at rest up to 35 respiratory movements per minute. What should be the actions of the nurse?

Task 2

Due to the pathology of the respiratory system and severe respiratory failure, the doctor prescribed oxygen therapy to patient S. What percentage of oxygen should be in the inhaled mixture?

Task 3

During physiotherapeutic procedures, the patient began to complain of weakness, dizziness, and severe shortness of breath. What should be the actions of the nurse in the situation?

3. Test tasks for self-control:

1. The most effective method of oxygen therapy:

- A. Delivery of oxygen from an oxygen pillow
- B. Supply of oxygen through nasal catheters
- C. Providing oxygen through a mask
- D. Delivery of oxygen through a ventilator
- E. Hyperbaric oxygenation, or oxygen barotherapy

2. What is the Bobrov apparatus used for:

- A. To purify oxygen from impurities
- B. For oxygen hydration
- C. To create the necessary pressure
- D. For mixing oxygen with nitrogen
- E. For a clear percentage ratio of oxygen and carbon dioxide

3. Manifestations of biological death

- A. involuntary urination
- B. decreased reflexes
- C. dryness of the sclera and conjunctiva
- D. constricted pupil
- E. a reversible process is possible after resuscitation measures

4. Oxygen therapy is:

- A. deep breathing of air
- B. use of pure oxygen for breathing
- C. active ventilation of the room
- D. use of a special composition enriched with nitrogen
- E. use of an oxygen mixture containing from 40 to 95% oxygen

5. Pure oxygen cannot be used for oxygen therapy due to:

- A. oppression of the respiratory center
- B. burns of the respiratory tract

- C. toxic effect on the body
 - D. convulsions, loss of consciousness
 - E. all of the above
6. Oxygen therapy is indicated:
- A. Acute and chronic respiratory failure is accompanied by cyanosis
 - B. a decrease in the partial pressure of oxygen in the blood
 - C. severe heart failure is accompanied by cyanosis
 - D. pronounced shortness of breath at rest
 - E. all of the above

Standards of answers to solving tasks.

Task 1: A. Task 2: A. Task 3: A. Task 4: E. Task 5: B.