

Стом-21ИИ

Federal State Budgetary Educational Institution of Higher Education

«North-Ossetia State Medical Academy»

of the Ministry of Healthcare of the Russian Federation

**Department of Traumatology and orthopedics**

**Approved by**

**The protocol of the meeting of the**

**Central Coordination Training**

**And Methodological Council**

**№ 5 in 23.05.23**

**ASSESSMENT TESTS**

**«Medicine of disasters»**

the main professional educational program of higher education - specialty program in the specialty 31.05.03 Dentistry, approved in May 24, 2023

For the fifth year students who study in English

Considered and approved at the meeting of the department

22.05.2023 (protocol №10)

**Head of the department**



D.M.S. professor

(S.S. Sabaev)

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**ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ ОБРАЗОВАТЕЛЬНОЕ  
УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ «СЕВЕРО-ОСЕТИНСКАЯ  
ГОСУДАРСТВЕННАЯ МЕДИЦИНСКАЯ АКАДЕМИЯ» МИНИСТЕРСТВА  
ЗДРАВООХРАНЕНИЯ РОССИЙСКОЙ ФЕДЕРАЦИИ**

**РЕЦЕНЗИЯ  
на оценочные материалы**

по дисциплине **Медицина катастроф**

для **студентов**

**5 курса**

по специальности **31.05.03 Стоматология, программа, частично реализуемая  
на иностранном языке**

Оценочные материалы составлены на кафедре травматологии и ортопедии на основании рабочей программы дисциплины Медицина катастроф и соответствуют требованиям ФГОС ВО по специальности (направлению подготовки) 31.05.03 Стоматология, программа, частично реализуемая на иностранном языке.

Оценочные материалы утверждены на заседании Центрального координационного учебно-методического совета.

Оценочные материалы по дисциплине «Медицина катастроф» включают в себя вопросы к модулю, банк тестовых заданий, ситуационные задачи, билеты к зачету.

Вопросы для оценки знаний к модулям позволяют адекватно оценить уровень подготовки студентов по дисциплине.

Банк тестовых заданий включает в себя следующие элементы: тестовые задания и шаблоны ответов к тестовым заданиям. Все задания соответствуют рабочей программе дисциплины «Медицина катастроф» и охватывают все ее разделы. Сложность заданий варьируется. Количество заданий по каждому разделу дисциплины достаточно для проведения контроля знаний и исключает многократное повторение одного и того же вопроса в различных вариантах. Банк содержат ответы ко всем тестовым заданиям.

Банк ситуационных задач содержит в себе следующие элементы ситуационные задачи и шаблоны ответов к ситуационным задачам. Все задания соответствуют рабочей программе дисциплины «Медицина катастроф» и охватывают все ее разделы. Сложность заданий варьируется. Количество задач достаточно для проведения контроля знаний и исключает многократное повторение одной и той же задачи в различных вариантах. Банк содержат ответы ко всем ситуационным задачам.

Количество билетов к зачету составляет 30, что достаточно для проведения зачета и исключает неоднократное использование одного и того же билета во время зачета в одной академической группе в один день. Билеты к зачету выполнены на бланках единого образца по стандартной форме, на бумаге одного цвета и качества. Билет к зачету включает в себя 3 вопроса и ситуационную задачу. Формулировки вопросов совпадают с формулировками перечня вопросов, выносимых на зачет. Содержание вопросов одного билета относится к различным разделам рабочей программы дисциплины, позволяющее более полно охватить материал дисциплины. Сложность вопросов в экзаменационных

билетах/билетах к зачету распределена равномерно.

В целом, оценочные материалы по дисциплине Медицина катастроф способствуют качественной оценке уровня владения обучающимися универсальными, общепрофессиональными и профессиональными компетенциями.

Рецензируемые Оценочные материалы по дисциплине Медицина катастроф могут быть рекомендованы к использованию для текущей и промежуточной аттестации на Стоматологическом факультете 31.05.03 Стоматология, программа, частично реализуемая на иностранном языке студентов 5 курса.

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## The passport of the assessment tests discipline

### «Medicine of disasters»

№№ p/p	Name of the controlled section(topic)discipline/ module	Competency index	Name of the estimates
1	2	3	4
<i>Type of control-intermediate</i>			
<i>1</i>	<b>«Medicine of disasters»</b>	<b>UC-8 GCC-7 PC-4</b>	<ul style="list-style-type: none"> <li>• <i>Questions for modul</i></li> <li>• <i>Collections of problems/practical tasks</i></li> <li>• <i>Collection of tests</i></li> <li>• <i>Test questions</i></li> </ul>

### *QUESTIONS FOR MODULES*

1. Tasks and organizational structure of the Unified State System of Prevention and Liquidation of Emergency situations.
2. Types and general characteristics of emergency situations.
3. Classification of disasters.
4. Types and general characteristics of natural disasters.
5. Types and general characteristics of man-made disasters.
6. Types and general characteristics of conflict disasters.
7. Damaging factors of sources of emergency situations.
8. Modes of functioning of the Unified State system of prevention and liquidation of emergency situations.
9. Tasks and organizational structure of the All-Russian Medical Service disasters (VSMK).
10. Regular and non-regular formations of the disaster medicine service, the order of their functioning.
11. The concept of development of sanitary aviation in the Russian Federation. 12. Fundamentals of the organization of medical evacuation provision of the population in emergency situations.
13. Types of medical care.
14. First aid, basic measures and the procedure for its provision.
15. Pre-medical (paramedic) medical care, the main measures and the procedure for rendering.
16. Urgent and delayed first aid measures.
17. Organization of assistance to victims of a traffic accident.
18. Stages of medical evacuation, deployment scheme and organization of its work.
19. Medical sorting of the affected in emergency situations.
20. Medical and tactical characteristics of foci of chemical disasters.
21. Organization of medical support for the population in the aftermath of chemical disasters.
22. Medical and tactical characteristics of the foci of radiation disasters.
23. Organization of medical support for the population in the aftermath of radiation disasters.
24. Medical and sanitary provision of the population in emergency situations of a transport nature.
25. Medical and sanitary provision of the population in the aftermath of explosions and fires.
26. Medical and sanitary provision of the population during the liquidation of the consequences of terrorist acts.
27. Organization of medical and sanitary provision of the population in the aftermath of earthquakes.

28. Organization of medical and sanitary provision of the population in the aftermath of floods.
29. Goals and objectives of sanitary and anti-epidemic provision of the population in emergency situations.
30. Characteristics of factors contributing to the development of epidemics in the emergency zone.
31. Organization of anti-epidemic measures in the epidemic focus of an emergency situation.
32. Regime-restrictive measures carried out in the epidemic focus, quarantine and observation, their brief description.
33. Preparation and organization of work of medical and preventive institutions in emergency situations.
34. The main activities carried out in health care facilities in case of a threat of an emergency.
35. Activities carried out in a medical institution in preparation for the mass reception of the affected.
36. Organization of evacuation of medical and preventive institutions to a safe zone.
37. Division into groups of patients who are in a medical facility according to the evacuation principle.
38. Brief description and classification of medical property.
39. The concept of a set and a set of medical equipment, their purpose. 40. Organization of medical supplies in the aftermath of emergencies.
41. Types of medical property reserves and their purpose.
42. Psychotraumatic factors of emergency situations.
43. Brief description of the periods of emotional and physiological state of people exposed to the damaging factors of emergency situations.
44. Features of the development of neuropsychiatric disorders in the population and rescuers in emergency situations.
45. Medical and psychological protection of the population and rescuers in emergency situations.
46. Participation of military medicine in emergency response.
47. Forces and means of military medicine used to eliminate the consequences of emergency situations.
48. The main tasks performed by medical and nursing teams the Medical Service of the Armed Forces in the aftermath of an emergency.
49. The main tasks performed by teams of specialized medical care (BSMP) of the medical service of the Armed Forces in the aftermath of an emergency. 50. The main tasks performed by the medical detachment of special purpose (MOSN) of the medical service of the Armed Forces in the aftermath of an emergency.
51. Individual respiratory protection equipment, their physiological and hygienic characteristics.
52. Principles of ventilation and oxygen therapy in the provision of emergency medical care in the field.
53. Skin protection products, their physiological and hygienic characteristics. 54. Personal protective equipment of the filtering type, their physiological and hygienic characteristics.
55. Individual protective equipment of insulating type, their physiological and hygienic characteristics.
56. Medical monitoring of gas mask training. Rules for the use of filtering and insulating gas masks.
57. Service personal protective equipment.
58. Organization and procedure of radiometric control. Radiometric monitoring devices. Permissible degrees of contamination of RV of various objects. 59. Tasks and procedure for assessing the radiation situation. Radiation reconnaissance devices.
60. Organization and procedure of dosimetric control. Dosimetric control devices. External radiation doses that do not lead to decrease in the working capacity of people.
61. The main factors of radiation hazard in accidents at nuclear power plants. Therapeutic and preventive measures in the hearth.

62. Methods of indication of toxic substances and AOXV. The procedure for assessing the chemical situation,
63. Means of indicating toxic substances and AOHV.
64. Organization and means of special treatment in foci and at the stages of medical evacuation.
65. Ionizing radiation: definition, types, biological effect
66. Acute radiation sickness
67. Chronic radiation sickness
68. Local radiation lesions
69. Lesions as a result of internal radioactive contamination
70. Radiation damage as a result of external general (total) irradiation
71. Medical means of prevention and assistance in chemical and radiation injuries
72. Forecasting the radiation situation. Calculation of possible sanitary losses in emergencies of peacetime and wartime
73. Measures of the medical service in the foci of chemical and radiation lesions
74. Medical and sanitary provision in the aftermath of chemical accidents.
75. Characteristics of natural emergencies. Fundamentals of the organization of medical and sanitary provision in the aftermath of natural disasters
76. Fundamentals of the organization of medical support in the aftermath of earthquakes.
77. Organization of medical care in floods.
78. Organization of medical care in forest and peat fires.
79. Medical and tactical characteristics of emergency situations of explosive and fire-hazardous nature.
80. Medical and tactical characteristics of road transport emergencies.
81. Medical and tactical characteristics of railway accidents.
82. Medical and tactical characteristics of aviation accidents and catastrophes.
83. Medical and tactical characteristics of accidents on water transport.
84. Features of medical and sanitary provision in case of terrorist acts.
85. Features of medical and sanitary provision in local armed conflicts.

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## **Department of Traumatology and orthopedics**

### **Collections of problems/practical tasks**

#### **«Medicine of disasters»**

**the main professional educational program of higher education - specialty program in the specialty**

**31.05.03 Dentistry**

#### **Situational tasks**

The victim I. was taken to the medical unit 2 hours after the completion of the work to eliminate the consequences of the chemical attack. Complains of shortness of breath during exercise, pain behind the sternum, excessive salivation and runny nose. It is known that when leaving the infected area, he damaged skin protection products. Approximately 1.5 hours after that, the symptoms listed above appeared and steadily increased. On examination, consciousness is clear, the skin is moist, the lips are cyanotic, acrocyanosis. The pupils are narrowed to 2 mm, the reaction to light is sluggish. Myofibrillation in the area of the right forearm and right hand. Pulse is 66 beats/min., rhythmic, heart tones are sonorous. Blood pressure is 130/80 mm Hg, the number of respiratory movements is 26 per minute, vesicular breathing, single dry wheezing wheezes are heard. The abdomen is soft, with palpation, soreness is determined along the course of the colon.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical unit and the evacuation destination of the affected person.

The victim A. was taken to the medical unit from the unit. Complains of cramping abdominal pain, nausea, repeated vomiting, headache, excessive salivation, the appearance of a "grid" in front of his eyes. About half an hour ago I drank water from an open water source.

When examined, he is excited, tends to take a sitting position.

The skin is moist, cyanotic, fibrillar twitching of the muscles of the tongue, face, and limbs are visible. The pupils are pinpoint, there is no reaction to light. Pulse is 62 beats / min, rhythmic, heart tones are muffled, blood pressure is 140/80 mm Hg, the number of respiratory movements is 32 per minute, breathing is noisy, exhalation is prolonged, scattered dry whistling and various wet wheezes are heard. The abdomen is soft, palpation determines soreness in the umbilical region and along the course of the colon.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical unit and the evacuation destination of the affected person.

The injured K. was taken to the medical unit from the hearth 2 hours after the use of chemical weapons. Complains of impaired vision, "fog" in front of the eyes, pain in the eyes and the bridge of the nose when trying to fix the gaze on any object, difficulty breathing. The listed symptoms appeared 15-20 minutes after exposure to the toxic substance. Independently administered an antidote from an individual first aid kit. On examination, he is somewhat excited, distracted. The skin is moist, the pupils are pinpoint, they do not react to light, the conjunctiva is hyperemic. Pulse is 60 beats /min, rhythmic, heart tones are sonorous, blood pressure is -150/90 mmHg, the number of breaths is 18 per minute, vesicular breathing.

1. Formulate and justify the diagnosis
2. Determine the amount of assistance in the medical unit and the evacuation destination of the affected person.

The injured K. was taken to the medical unit from the center of the use of chemical weapons 2.5 hours after the chemical attack. Complains of pain behind the sternum, headache, dizziness, "fog" before the eyes. These changes in the condition of the victim occurred 10-15 minutes after leaving the infected area. Independently administered an antidote from an individual first aid kit On examination, he is apathetic, depressed. The skin is moist, the pupils are

narrowed, the reaction to light is weakened. Pulse is 70 beats/min, rhythmic, heart tones are muffled, there is no noise, blood pressure is 150/90 mm Hg, vesicular breathing.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical unit and the evacuation destination of the affected person.

The victim B. was taken to the medical unit from the center of the use of chemical weapons 2 hours after the chemical attack. Complains of weakness, headache, dizziness, blurred vision, fear and anxiety, difficulty breathing, nausea. According to the victim, the changes of well-being described by him occurred 15-20 minutes after the explosion of a chemical munition. Independently administered an antidote from an individual first aid kit.

During the examination, the consciousness is clear, excited, shows aggressiveness towards the medical staff. The skin is moist, the pupils are narrowed, their reaction to light is weakened, the pulse is 62 beats /min, rhythmic, satisfactory filling, the heart tones are sonorous. Blood pressure is 130/80 mm Hg, breathing is hard, the abdomen is painless.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical unit and the evacuation destination of the affected person.

The victim S. was taken to the medical unit from the hearth 2 hours after the use of chemical weapons. Complains of a feeling of lack of air, shortness of breath, pressing pains behind the sternum, "fog" in front of his eyes. It is known that when overcoming the infection zone, he accidentally tore a rubber glove. After about an hour, I felt weakness, blurred vision, difficulty breathing, and repeated vomiting.

On examination, consciousness is clear, excited, occupies a forced sitting position with fixation of the shoulder girdle, breathing is noisy.

The skin is moist, the lips are cyanotic, the pupils are narrow, they do not react to light, saliva is abundantly released from the mouth, fibrillar twitching of individual muscle groups of the face. Pulse is 58 beats / min, rhythmic, heart tones are sonorous, blood pressure is 150/85 mm Hg. the number of breaths is 26 per minute, breathing is hard, elongated exhalation, an abundance of dry whistling and wet wheezes. The abdomen is soft, moderately painful on palpation

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical unit and evacuation

The victim V. was taken to a medical detachment from the center of the use of chemical weapons in protective equipment. According to the attendant, it is known that a few minutes after the chemical attack, he put on a gas mask on his own, injected an antidote from an individual first aid kit. After 10-15 minutes, the victim's behavior became inadequate, tried to tear off the gas mask, gesticulated unnecessarily, ran in the opposite direction. He was stopped by his comrades, taken out of the infected area and taken to the medical unit. When examined, he is excited, constantly turns his head, waves his hands, mumbles something incoherently. Sweat-covered skin is visible through the glasses of the gas mask, the eyes are open, the pupils are sharply narrowed, fibrillar twitching of the facial muscles. The number of breaths is about 30 per minute, exhalation is difficult.

1. Formulate and justify the diagnosis,
2. Determine the amount of assistance in the medical unit and the evacuation destination of the affected person.

The victim G. was taken to a medical detachment from the focus of the use of chemical weapons in protective equipment. It is known that the gas mask was put on a few minutes after the start of the chemical attack. I failed to introduce an antidote.

Upon examination, it was found that the affected person is in a coma, general clonic-tonic convulsions are periodically observed, a sweaty face can be seen through the glasses, myofibrillation of the mouse of the face and closed eyelids. The number of breaths is 36 per minute, whistling wheezes can be heard in the distance. During the partial sanitary treatment, another attack of convulsions was observed, in which respiratory arrest occurred.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical unit and the evacuation destination of the affected person.

During a field training session on overcoming an infected area (blowing up a smoke bomb with 5% sarin), held in the summer at a temperature of about 25 ° C, the victim 3. lost consciousness. 2 ml of 0.1% atropine solution was injected, the victim was loaded into an ambulance to follow the medical detachment. Convulsions of a clonic-tonic nature appeared on the way, which was regarded as a severe lesion

with a nerve agent and an additional 1 ml of 0.1% atropine solution was injected. After 15 minutes, he was taken to the medical unit.

On examination, the condition is severe, coma. The skin is hyperemic, dry, warm. The tongue is dry, the pupils are dilated to 8 mm, there is no reaction to light. The pulse is 160 beats/min, rhythmic, the heart tones are weakened. Blood pressure is 80/40 mm Hg. Breathing is shallow, the abdomen is painless.

1. Formulate and justify the diagnosis.
2. Evaluate the actions of the medical staff.
3. Determine the amount of assistance in the medical unit and the evacuation plan

The victim Zh. in order to treat pubic pediculosis, he treated the hair areas of the body with an aerosol "Prima" for three days. By the end of the third day, they began to worry about weakness, sweating, dizziness, "fog" before their eyes, difficulty breathing, insomnia, nausea, vomiting appeared, there was liquid stool twice.

By the morning of the next day, there were myofibrillations in the calf muscles, which forced me to go to the medical center of the unit.

On examination, the condition is of moderate severity, excited, anxious. The skin is moist, myofibrillation is common. Pupils are narrowed, photoreaction is weakened. Pulse is 68 beats /min, rhythmic, heart tones are muted, blood pressure is 140/60 mm Hg. The number of breaths is 30 per minute, breathing is noisy, with auscultation there is a significant elongation of exhalation, an abundance of wheezing. The abdomen is soft, soreness is determined in the umbilical region, along the course of the colon.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical unit and the evacuation purpose of the post

The victim L. was taken to the medical unit from the hearth 2 hours after the use of chemical weapons. Complains of some tightness in the chest, shortness of breath, general weakness. Immediately after the explosion, there was a pain in the eyes, scratching and scratching in the nasopharynx, cough, nausea, single vomiting. After leaving the zone, the condition improved noticeably.

On examination, the skin is active, the skin is of normal color, the pulse is 64 beats/min, satisfactory filling, heart tones are muted, blood pressure is 110/90 mm Hg, the number of breaths is 28 per minute, breathing is weakened.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical unit and the evacuation destination of the affected person.

The injured U. was taken to the medical unit from the hearth 2 hours after the use of chemical weapons. Consciousness is absent. According to the attendant, during the evacuation, the victim had widespread clonic-tonic seizures.

On examination, a comatose state with a complete loss of sensitivity and reflexes. The skin and mucous membranes are bright scarlet, the pupils are dilated, they do not react to light. The pulse on the large arteries is not determined, breathing is rare, 4-5 per minute, arrhythmic. Involuntary urination took place during the examination.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical unit and the evacuation destination of the affected person.

The injured Y. was taken to the medical unit from the hearth a day after the use of chemical weapons. Complains of severe pain in the eyes, photophobia, lacrimation, dizziness, weakness, nausea, vomiting. According to the victim, drops of OV got on the skin of the face and into the eyes. After a few minutes, I felt a feeling of sand in my eyes, photophobia, lacrimation, which steadily increased.

On examination, he is somewhat inhibited, sluggish, adynamic. Blepharospasm, pronounced edema and hyperemia of the eyelids, erythematous foci on the skin of the face Pulse 60 beats / min, rhythmic, heart tones are weakened, blood pressure is 90/60 mm Hg. Breathing is hard.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical unit and the evacuation destination of the affected person.

The victim M. called an ambulance 10 hours after poisoning. Complains of headache, nausea, abdominal pain. I drank 100 ml of antifreeze for the purpose of intoxication. After 15-20 minutes, I felt slightly intoxicated and drowsy, fell asleep. I woke up after 3 hours, developed a strong psychomotor and motor excitement: I ran around the territory of the garage cooperative, showed aggressiveness. He was tied up by his relatives and put to bed. I slept uneasily, I was worried about abdominal pain, there was a single vomiting.

When examined, he is excited, insufficiently oriented in place and time. The face is puffy, hyperemic, the lips are cyanotic, the vessels of the eyes are injected. Pulse is 92 beats/min, rhythmic, blood pressure is 120/80 mm Hg, breathing is deep, noisy, the number of breaths is 20 per minute. The abdomen is slightly swollen, painful in the epigastrium.

1. Formulate and justify the diagnosis.
2. Determine the volume of the ambulance and the evacuation destination of the victim.

The victim N. was taken to a medical center 8 hours after poisoning. Consciousness is absent. According to relatives, it is known that for the purpose of intoxication he drank about 150 ml of liquid with the smell of alcohol. Almost immediately, a picture of intoxication developed, then weakness, nausea, and repeated vomiting appeared. Complained of abdominal pain, visual impairment, then lost consciousness.

On examination - coma. The skin is pale, noisy breathing, the smell of alcohol from the mouth. Pulse is 116 beats/min, rhythmic, blood pressure is 90/60 mm Hg. the number of breaths is 24 per minute, the abdomen is soft, painful in the epigastric region.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical center and the evacuation destination of the victim.

The victim R. was taken to a medical center 30 minutes after poisoning. Complains of pain and burning sensation along the esophagus and in the epigastric region, weakness, dizziness, vomiting with streaks of blood. All this appeared immediately after accidentally drinking a sip of the oily liquid used for gluing plastic products.

On examination, he is excited, the skin and visible mucous membranes are pale, the pulse is 120 beats / min, rhythmic, heart tones are weakened, blood pressure is 90/50 mm Hg. Breathing is vesicular. The abdomen is slightly swollen, painful in the epigastric region.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical center and the evacuation destination of the victim.

The victim T. was taken to the medical center in an unconscious state. According to relatives, about 6 hours before that, he washed clothes indoors in a solution of technical liquid.

During the examination, consciousness is lost, but the reaction to pain stimuli is preserved. The skin and visible mucous membranes are pale, there is an aromatic smell in the exhaled air. Pulse is 80 beats/min, rhythmic, heart tones are sonorous, blood pressure is 90/60 mm Hg. The number of breaths is 18 per minute, vesicular breathing, the abdomen is soft, painless.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical center and the evacuation destination of the victim.

The victim A. was taken to the medical center in an unconscious state. It is known that about half an hour ago I drank 20-30 ml of a colorless liquid with an aromatic smell. Immediately there were pains in the epigastric region, dizziness, ataxia, loose stools. Then he lost consciousness.

When examined unconscious, pronounced marbling of the skin, pupils dilated. Pulse IN beats / min, heart tones are deaf, the I tone at the apex is weakened, blood pressure is 85/40 mm Hg. The tongue is overlaid with a gray coating, the abdomen is soft, painful in the epigastric region.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical center and the evacuation destination of the victim.

The victim V. was in the center of napalm application. Delivered to a medical center after 2 hours. Complains of a throbbing headache, tinnitus, the appearance of "fog" before the eyes, increasing muscle weakness, mainly in the legs.

Upon examination, psychomotor agitation, euphoria, hyperemia of the face is noted. Pulse % beats/min, heart tones are weakened, blood pressure is 90/70 mm Hg, the number of breaths is 24 per minute, vesicular breathing. Body temperature 37.0 ° C.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical center evacuation destination of the victim.

The injured K. was removed from the cab of a truck with the engine running. He is in a comatose state. The skin is hyperemic with a cyanotic tinge, the pupils are dilated, they do not react to light, there are no reflexes.

The pulse is arrhythmic, thready, about 100 beats / min, the heart tones are sharply weakened, blood pressure is 80/50 mmHg. Body temperature 39.5 ° C.

1. Formulate and justify the diagnosis.
2. Determine the amount of assistance in the medical center evacuation destination of the victim.

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**Department of Traumatology and orthopedics**

**Collection of tests**

**«Medicine of disasters»**

**the main professional educational program of higher education - specialty program in the specialty  
31.05.03 Dentistry**

For the Fifth year students who study in English

**Entrance test**

1. During the first aid, the victim suddenly turned pale, stopped reacting to his surroundings. Indicate where you will begin to provide first aid:

- a) check for signs of breathing;
- b) open the airways;
- c) call an assistant;
- d) start chest compression;
- e) examine the victim;
- f) take 2 breaths of artificial lung ventilation;
- g) check for signs of consciousness (shake the victim and ask: "What's wrong with you?").

2. To temporarily stop arterial bleeding, the following steps must be performed:

- a) perform finger pressure of the artery, apply a pressure bandage to the wound, if necessary, apply a hemostatic tourniquet;
- b) apply a hemostatic tourniquet;
- c) apply a pressure bandage to the wound, deliver the victim to a medical organization;
- d) clamp the artery in the wound, apply a hemostatic tourniquet.

3. When an ambulance is called:

- a) immediately after first aid to the victims;
- b) immediately after determining the presence of victims at the scene;
- c) after determining the approximate number and condition of the victims;
- d) immediately upon arrival at the scene of a traffic accident.

4. The frequency of pressure during chest compression is:

- a) 60-80 in 1 minute;
- b) 40-50 in 1 minute;
- c) at least 100 in 1 minute;
- d) 80-90 in 1 minute;
- e) 60 in 1 minute.

5. In what cases is a precordial stroke applied during first aid:

- a) a precordial stroke is not applied;
- b) if the victim has no signs of life;
- c) in the absence of the effect of cardiopulmonary resuscitation;
- d) when the victim has pain behind the sternum.

6. The victim with a chest injury should be given the following position:

- a) position on the back with raised legs;
- b) stable lateral position;

- c) a semi-sitting position with an inclination to the affected side;
  - d) position on the back with half-bent and spread legs;
  - e) position on the stomach.
7. Signs of arterial bleeding are:
- a) a pulsating scarlet stream of blood, a rapidly spreading pool of scarlet blood, the victim's clothes quickly soaked in blood;
  - b) a pool of blood with a diameter of more than 1 meter around the victim;
  - c) an abundant jet of dark-colored blood, accompanied by a sharp deterioration in the condition of the victim;
  - d) profuse outflow of blood from the entire surface of the wound.
8. Indicate in which cases the emergency removal of the victim from the emergency vehicle is carried out:
- a) in all cases when the victim requires immediate first aid;
  - b) emergency extraction of the victim is carried out only by emergency medical personnel or rescuers of the Ministry of Emergency Situations;
  - c) the presence of a threat to the life and health of the victim and the inability to provide first aid in the car;
  - d) if the victim has no signs of serious injuries.
9. When determining the signs of life in the victim, the following are checked:
- a) signs of consciousness;
  - b) signs of consciousness and breathing;
  - c) signs of consciousness, respiration and blood circulation;
  - d) signs of consciousness, respiration and blood circulation, the reaction of the pupils to light.
10. The correct depth of inhalation of artificial respiration during cardiopulmonary resuscitation is controlled according to the following criteria:
- a) the beginning of chest lift;
  - b) the beginning of abdominal lifting;
  - c) maximum chest swelling;
  - d) the appearance of resistance when inhaling.
11. First aid is provided in all of the following cases, except for the following:
- a) lack of consciousness, breathing and blood circulation;
  - b) injuries to various areas of the body and external bleeding;
  - c) foreign bodies in the upper respiratory tract;
  - d) burns, effects of exposure to high temperatures, thermal radiation;
  - e) frostbite and other effects of exposure to low temperatures;
  - f) poisoning;
  - g) acute infectious diseases.
12. If there are signs of moderate airway blockage, the following first aid measures should be performed:
- a) tap the base of the palm into the interscapular area of the victim to extract a foreign body;
  - b) offer the victim to clear his throat;
  - c) perform 5 sharp thrusts into the iliac region of the abdomen of the victim;
  - d) in this case, first aid measures are not required.
13. Select the signs of internal bleeding:
- a) rapid weak pulse;
  - b) nausea and vomiting;
  - c) a feeling of thirst;
  - d) frequent breathing;
  - e) weakness, dizziness;
  - f) all of the above;
  - g) none of the above.
14. Observation of the victim, who received first aid, is carried out:
- a) before the victim is delivered to a medical organization;
  - b) before the arrival of an ambulance at the scene of the accident;
  - c) until his well-being improves;
  - d) until the moment of his transfer to the ambulance team.
15. The purpose of giving the victim an optimal position of his body is:
- a) to increase the convenience for the person providing first aid;
  - b) providing access for the application of bandages, hemostatic tourniquets, etc.;

- c) giving the victim a comfortable position that provides him with comfort, reduces the degree of his suffering and does not aggravate the violation of vital functions;
  - d) prevention or reduction of the risk of spontaneous movement of the victim's body.
16. Choose the main ways to stop bleeding from a head injury:
- a) direct pressure on the wound, applying a pressure bandage;
  - b) applying a pressure bandage, finger pressing of the carotid artery;
  - c) finger pressing of the carotid artery, applying a pressure bandage using a tourniquet;
  - d) the use of cold in the area of injury, finger pressing of the carotid artery.
17. Select the main signs of a severe blockage of the upper respiratory tract by a foreign body in the victim:
- a) cannot breathe or breathing is clearly difficult (noisy, hoarse), grabs his throat, cannot speak, only nods;
  - b) grabs his throat, coughs, asks for help;
  - c) coughs violently, tries to say something, his face turns purple;
  - d) complains about the presence of a foreign body in the respiratory tract, says that he "choked", asks to knock on the back.
18. The victim suddenly lost consciousness. Breathing is present. Select the necessary action:
- a) the victim should be placed in a stable lateral position (recovery pose, stable lateral position);
  - b) to prevent possible inhalation of vomit, it is necessary to lay the victim on his stomach;
  - c) to prevent possible inhalation of vomit, turn the victim's head sideways;
  - d) to restore consciousness as soon as possible, it is necessary to press the victim on the pain points (angle of the lower jaw, upper lip, etc.);
  - e) you should give a sniff of ammonia on cotton wool;
  - f) it is necessary to give a position on the back with raised legs to ensure better blood supply to the brain of the victim.
19. With a penetrating wound of the chest, the most important thing is:
- a) try to stop the bleeding with a pressure bandage;
  - b) do not touch the wound in order to avoid causing harm;
  - c) apply an air-tight bandage to the chest wound;
  - d) timely anesthetize the victim;
  - e) constantly monitor the breathing and blood circulation of the victim;
  - f) give the victim a stable lateral position.
20. Signs of blood loss are everything except the following:
- a) sharp general weakness, a feeling of thirst;
  - b) dizziness, flashing of flies before the eyes;
  - c) fainting, more often when trying to get up, pale, wet and cold skin;
  - d) decrease in heart rate, decrease in respiratory rate;
  - e) rapid weak pulse, rapid breathing.
21. If there is a foreign object in the wound, the following would be more correct:
- a) urgently remove a foreign object from the wound, stop the bleeding by available means, call an ambulance;
  - b) do not remove a foreign object from the wound, apply a bandage around the foreign object, having previously fixed it with napkins or bandages, call an ambulance;
  - c) not to take any action before the arrival of medical workers;
  - d) treat the wound with an antiseptic solution, close the wound with a sterile cloth, call an ambulance;
  - e) carefully remove the foreign object, stop bleeding from the wound by filling it with sterile wipes, call an ambulance, put cold on the wound site.
22. A 55-year-old man had severe burning pains behind the sternum against the background of psychoemotional stress. What will be the first aid?
- a) to give the victim a comfortable position, providing physical and emotional peace, to call an ambulance, to observe the victim before her arrival;
  - b) lay the victim with raised lower limbs, give a nitroglycerin tablet under the tongue, call an ambulance, observe the victim before her arrival;
  - c) invite the victim to visit the polyclinic, recommend taking a nitroglycerin tablet under the tongue, escort the victim to the polyclinic;

d) call the victim's relatives, find out what medications he is taking, let him take these medications, put him to bed, provide physical and emotional peace, while maintaining pain for an hour, call an ambulance;  
e) to give the victim a comfortable position, providing physical and emotional peace, to call an ambulance, to observe the victim before her arrival, to offer the patient to take the prescribed he needs medication.

23. Specify the main purpose of the survey of the victim:

- a) to assess his general condition;
- b) detect obvious signs of external bleeding (primarily arterial);
- c) try to detect injuries to various areas of the body;
- d) determine whether the victim needs first aid.

24. During chest compression, pressure is applied by hands to the following point:

- a) the upper half of the sternum;
- b) the middle of the chest;
- c) the heart area;
- d) the lower part of the sternum.

25. A hemostatic tourniquet is applied in the following cases:

- a) with arterial bleeding;
- b) with copious venous bleeding;
- c) with all types of severe bleeding;
- d) when determining a large pool of blood.

26. First aid measures include all of the following, except for the following:

- a) measures to assess the situation and ensure safe conditions for first aid, calling an ambulance;
- b) determination of the presence of consciousness and signs of life in the victim;
- c) measures for cardiopulmonary resuscitation;
- d) measures for the use of painkillers in severe injuries and shock;
- e) measures to examine the victim, stop external bleeding and provide first aid for injuries, poisoning and other conditions threatening the life and health of the victim;
- f) giving the victim an optimal body position and monitoring the condition of the victim (consciousness, breathing, blood circulation);
- g) providing psychological support to the victim and transferring him to the ambulance team.

27. In case of complete blockage of the upper respiratory tract by a foreign body, first aid should begin with the action:

- a) try to remove a foreign body with a sharp blow to the upper abdomen
- b) ask the victim: "Did you choke? Can you talk?"; c
- ) apply several blows to the interscapular area, tilting the patient forward;
- d) call an ambulance;
- e) try to induce vomiting in the patient by pressing two fingers on the root language;
- f) find out from the victim what he choked on.

28. What kind of assistance should be provided to a victim with a suspected fracture of the shin bones if the injury was received in a locality:

- a) fix the shin with improvised means, call an ambulance;
- b) help the victim to take a comfortable position, call an ambulance, apply cold to the place of the alleged fracture;
- c) fix the shin with transport tires, apply cold, take the victim to the emergency room;
- d) fix the shin with transport tires, give an anesthetic, call an ambulance, apply cold to the place of the alleged fracture.

29. Choose a sequence of detailed examination of the victim, who is conscious:

- a) head, neck, chest, abdomen, legs and arms;
- b) chest, head and neck, legs and arms, abdomen;
- c) head, chest, abdomen, neck, arms and legs;
- d) legs and arms, head and neck, chest and abdomen.

30. Finger pressing of the carotid artery is performed:

- a) on the side of the neck behind the sternocleidomastoid muscle with one thumb or several fingers towards the spine;

- b) on the front surface of the neck outside of the larynx with the index, middle and ring finger simultaneously or with one thumb towards the spine;
- c) on the side of the injury with two fingers (index and middle) in the larynx area below the injury site.

«**Medicine of disasters**» tests

1. Security is provided in the following areas of activity ...

- a) economic, medical and educational;
- b) industrial, intellectual and economic;
- c) technogenic, natural and social;
- d) collective, individual and public.

Correct answer: V.

2. The technogenic sphere characterizes:

- a) natural disasters;
- b) the work of the industrial complex;
- c) the work of medical and educational institutions;
- d) the work of cultural and educational institutions.

The correct answer is: b.

3. The natural sphere characterizes:

- a) the operation of transport;
- b) the operation of communication facilities; c
- ) natural disasters;
- d) the work of the industrial complex.

Correct answer: V.

4. A person who is affected or has suffered material losses as a result of an emergency is called

...

- a) victims;
- b) affected; c) injured;
- d) victims.

Correct answer: G.

Fires, explosions (threat of explosion), sudden collapse of buildings and structures.

1. An explosion is always accompanied by...

- a) significant crushing action;
- b) a light flash, a sharp sound and an unpleasant smell;
- c) a large amount of released energy;
- d) a large amount of smoke and dust emitted.

Correct answer: V.

2. Uncontrolled, spontaneously developing gorenje process, accompanied by the destruction of material

values and creating danger to human life, is called ...

- a) by fire;
- b) by fire;
- c) by fire;
- d) flash.

Correct answer: V.

3. The most severe damage in the explosion is received by people who are at the time of the arrival of

the shock wave:

- a) outside shelters in a standing position;
- b) outside shelters in a sitting position;
- c) out of hiding in a crouching position;
- d) out of hiding in a sitting or crouching position.

The correct answer is: a.

4. Explosive objects include ...

- a) warehouses for storing household chemicals;
- b) defense industry enterprises;
- c) fire-hazardous objects;
- d) service sector enterprises.

The correct answer is: b.

5. The main damaging factors of a fire include ...

- a) fragmentation fields;
- b) high oxygen concentration;
- c) the impact of the blast wave;
- d) fire and sparks.

The correct answer is: G. Transport emergencies.

1. The passenger of the vehicle is in danger...

- a) only when boarding and disembarking;
- b) when boarding, disembarking, actually on a trip and in an emergency situation;
- c) only in case of an emergency;
- d) only while driving.

The correct answer is: b.

2. According to the World Health Organization, about \_\_\_\_\_ people die in road accidents in Russia every year.

- a) 1000;
- b) 3000;
- c) 500;
- d) 14000.

Correct answer: G.

3. Choose the most reliable fulcrum inside a moving tram, trolleybus or bus:

- a) horizontal handrail above the head;
- b) the handrail of the back of the chair;
- c) vertical handrail at the door;
- d) horizontal handrail at the rear window.

The correct answer is: a.

4. An incident that resulted in the death of people, the destruction of air transport, a vessel or its disappearance without a trace is called...

- a) crash;
- b) breakdown of the aircraft;
- c) an aviation accident;
- d) an accident.

Correct answer: V.

5. The main causes of accidents on urban transport include...

- a) dispatcher errors;
- b) low driver qualification;
- c) indiscipline of road users;
- d) the intensity of traffic flows.

The correct answer is: a.

6. If the brakes of the vehicle (bus) fail, it is necessary ...

- a) rush to the driver's aid;
- b) try to leave the bus by knocking out the window or opening the door;
- c) put soft things in front of you, rest your feet and hands on the back of the chair in front of you;
- d) stand in the aisle and firmly grasp the handrails.

The correct answer is: b.

First aid

1. In children from one to eight years of age, the depth of pressing on the chest during indirect heart

massage is \_\_\_\_\_ centimeters (s).

3–4

1–2

5–6

6–7

Solution: In

children from one to eight years old, the depth of pressing on the chest during indirect heart massage is

3-4 centimeters.

2. In children under one year old, the point of pressing on the chest during indirect heart massage is

located ...

one finger below the interstitial line

two fingers below the interstitial line

two fingers from the sternum

three fingers from the sternum

Decision:

In children under one year of age, the point of pressing on the chest during indirect heart massage is

located one finger below the interstitial line.

3. Optimal ratio (inhalation/pressure) with indirect heart massage in children under 10 years of age is ...

5 chest compressions – 1 breath

10 chest compressions – 1 breath

8 chest compressions – 2 breaths

15 chest presses – 2 breaths

Solution:

Optimal ratio (inhalation/pressure) with indirect heart massage in children under 10 years of age, there

are 5 pressures on the chest - 1 breath.

4. The optimal rate of indirect heart massage for children under 10 years is \_\_\_\_\_ pressure per minute.

100–120

60–70

60–80

120–140

Solution: The

optimal rate of indirect heart massage for children under 10 years is 100-120 pressures per minute.

6. The optimal rate of indirect heart massage for an adult is \_\_\_\_\_ pressure per minute.

60–70

50–60

40–60

100–120

Solution: The

optimal rate of indirect heart massage for an adult is 60-70 pressures per minute.

7. Late signs of circulatory arrest appear in the first \_\_\_\_\_ seconds.

20–60

10–15

5–10

15–20

Solution:

Late signs of circulatory arrest appear in the first 20-60 seconds.

8. A condition in which consciousness and ocular reflexes are absent, heart tones are deaf, blood pressure is not determined, the pulse in the peripheral vessels is not palpated, on the carotid arteries of

weak filling, breathing is rare, convulsive or deep, frequent, is called ...

agony

clinical death

biological death

preagonia

Decision:

A condition in which consciousness and eye reflexes are absent, heart tones are deaf, blood pressure is

not determined, the pulse in the peripheral vessels is not palpated, on the carotid arteries – weak filling,

breathing is rare, convulsive or deep, frequent, is called agony. The duration of the agonal state is from

several minutes to several hours. In agony, it is possible to include a complex of the last compensatory

reactions of the body. Often there is a "surge" of almost extinct activity of the cardiovascular and respiratory systems. Sometimes consciousness is restored for a short time. However, the depleted organs very quickly lose their ability to function, and respiratory and circulatory arrest occurs, i.e. clinical

death occurs.

9. A condition characterized by inhibition of consciousness, a drop in systolic arterial pressure, an

increase and decrease in the filling of the pulse, shortness of breath, a change in the color of the skin, is

called ...

preagonia

clinical death

biological death

agony

Decision:

A condition characterized by inhibition of consciousness, a drop in systolic arterial pressure, an increase

and decrease in the filling of the pulse, shortness of breath, a change in the color of the skin is called

preagonia. Preagonia is characterized by a drop in systolic arterial pressure to 50-60 mmHg, a change in

the color of the skin (pallor, cyanosis, marbled pattern). The duration of preagonia ranges from a few

minutes and hours to a day. With the deterioration of the condition, the following state occurs - agony.

10. Dilation of the pupils in the absence of their reaction to light, the disappearance of breathing or

convulsive breathing, the appearance of earthy-gray skin coloration are ...

late signs of circulatory arrest

early signs of circulatory arrest

signs of acute respiratory failure

signs of acute renal failure

Decision:

Dilation of the pupils in the absence of their reaction to light, the disappearance of breathing or convulsive breathing (2-6 breaths and exhalations per minute), the appearance of an earthy-gray skin

color (primarily the nasolabial triangle), are late signs of circulatory arrest. This condition remains

reversible.

11. The disappearance of the pulse on the carotid artery, lack of consciousness, convulsions, are

...

early signs of circulatory arrest

late signs of circulatory arrest

signs of biological death

signs of acute respiratory failure

Decision:

The disappearance of the pulse on the carotid artery, lack of consciousness, convulsions, are early signs

of circulatory arrest, which appear in the first 10-25 seconds. This condition remains reversible.

13. The complex of resuscitation measures should be carried out before the appearance of the victim ...

signs of recovery

clear consciousness

articulate speech

motor activity

Decision:

A complex of resuscitation measures should be carried out before the victim shows signs of recovery.

14. Signs of the appearance of a good pulsation on the carotid artery, a gradual narrowing of the pupils,

the appearance of a pink tinge of skin over the upper lip are called ...

signs of revival by

clinical death, a

preagonal condition,

biological death

Decision:

The appearance of a good pulsation on the carotid artery, a gradual narrowing of the pupils, the appearance of a pink skin tone over the upper lip are called signs of the victim's revival.

1. A limited cavity in the tissues filled with blood, formed during trauma, due to the uneven spreading of

the bruised tissues of the human body soaked in blood, is called ...

hematoma

bruise

wound

bruise

Decision:

A limited cavity in the tissues filled with blood, formed during injury due to uneven spreading of the

bruised tissues of the human body soaked in blood, is called a hematoma.

2. A limited cavity formed by uneven blood impregnation of human body tissues, filled with blood, is

called ...

hematoma  
phlegmon  
atheroma  
hygroma

Decision:

A limited cavity formed by uneven blood impregnation of human body tissues, filled with blood, is called a hematoma.

3. Bleeding that occurs immediately after damage to blood vessels is called ...

primary  
repeated  
massive  
copious

Decision:

Bleeding that occurs immediately after damage to blood vessels is called primary.

4. If internal organs are damaged: liver, spleen, kidneys, lungs - there is \_\_\_\_\_ bleeding.

parenchymal  
capillary  
venous arterial

Decision:

If internal organs are damaged: liver, spleen, kidneys, lungs – parenchymal bleeding occurs. It is always

very life-threatening and requires urgent surgical intervention.

5. A hemostatic tourniquet is applied to the injured limb in case of \_\_\_\_\_ bleeding.

severe arterial  
prolonged venous  
prolonged parenchymal  
copious capillary

Decision:

A hemostatic tourniquet is applied to the injured limb in case of severe arterial bleeding, which cannot

be stopped by other means. A tightened hemostatic tourniquet on a wounded limb can be kept for no

more than 1.5-2 hours. At the same time, the injured limb should be kept elevated. After every 20-30

minutes, the tourniquet must be relaxed for a few seconds to drain the blood and tighten again. A note

is attached under the tourniquet indicating the date, hour and minute of its imposition.

6. One of the dangerous complications of wounds is ...

pain shock  
bleeding  
suppuration  
inflammation

Decision:

One of the dangerous complications of wounds is a painful shock, accompanied by a violation of the

functions of vital organs. To prevent pain shock, an analgesic is administered to the wounded, and in its

absence, if there is no penetrating wound to the abdomen, alcohol, hot tea, coffee are given.

7. A life-threatening complication of severe lesions characterized by a disorder of the central nervous

system, blood circulation, metabolism and other vital functions that appears at the time of injury or

shortly after it is called ...

primary shock

secondary shock

agonal state prediagonal

state

Decision:

A life-threatening complication of severe lesions characterized by a disorder of the central nervous

system, blood circulation, metabolism and other vital functions that appears at the time of injury or

shortly after it is called primary shock. Secondary shock may occur after assistance to the victim due to

his careless transportation.

8. Injuries on the human body resulting from the impact of a sharp cutting tool, having smooth edges, a

small affected area, but bleeding heavily, are called \_\_\_\_\_ wounds.

cut and

stabbed

bruised chopped

Decision:

Injuries on the human body resulting from the impact of a sharp cutting tool, having smooth edges, a

small affected area, but bleeding heavily, are called cut wounds.

9. In case of penetrating wound of the abdominal cavity, accompanied by loss of internal organs into the

wound, it is forbidden ... to

set organs into the wound to

treat the edges of the wound with iodine solution to

treat the edges of the wound with alcohol solution to

apply a soft bandage

Decision:

In case of penetrating wound of the abdominal cavity, accompanied by loss of internal organs into the

wound, it is forbidden to set the organs into the wound. This will significantly complicate the work of

surgeons in the future and lead to additional complications.

10. Signs of a properly applied tourniquet are ...

stopping bleeding, lack of pulse in peripheral arteries

stopping bleeding, numbness of the skin of the limb

reducing bleeding, paleness of the skin

reducing bleeding, bluish skin tone

Decision:

Signs of a properly applied tourniquet are stopping bleeding, absence of a pulse in the peripheral artery.

If the bleeding is not stopped or there is a feeling of numbness of the skin, then the tourniquet is applied

incorrectly.

11. A sign of arterial bleeding is ... scarlet

blood flowing out of the wound in a pulsating stream

, dark blood continuously flowing out of the wound

oozing from the wound, hard to stop dark blood  
oozing from the wound, easy to stop scarlet blood

Decision:

A sign of arterial bleeding is scarlet blood flowing from the wound in a pulsating stream.

12. A sign of venous bleeding is ... dark

-

colored blood continuously flowing out of the wound, scarlet blood  
oozing out of the wound, easily stopping blood  
oozing out of the wound, difficult to stop blood

Solution: A

sign of venous bleeding is dark blood continuously flowing from the wound.

13. One of the signs of acute blood loss are ...

low blood pressure, frequent threadlike pulse

high blood pressure, frequent pulse

high blood pressure, rapid breathing

drowsiness, pallor, rare pulse

Decision:

One of the signs of acute blood loss is low blood pressure, frequent thready pulse. In addition to these

signs, there may be cooling and the appearance of skin moisture, confusion, dry mouth and thirst, dilated pupils, increased breathing. Acute blood loss with internal bleeding is especially dangerous,

emergency surgical care is required to stop it.

First aid in case of thermal injuries

1. In case of a chemical burn, it is forbidden ... to

treat the skin with wet wipes and

rinse the skin under a stream of water

quickly remove soaked clothes and

make cold lotions

Solution: In

case of a chemical burn, it is forbidden to treat the affected skin with water-soaked tampons, napkins,

since in this case chemical compounds are rubbed even more into the skin. In case of chemical burns,

first of all, it is necessary to quickly remove soaked clothes, rinse the burn under running water.

Chemicals must be washed off with a large amount of water from under the tap until the specific smell

of the substance disappears, thereby preventing its effect on tissues and the body.

2. The alternating current of the electrical network with a voltage of \_\_\_\_ volts passing through the

human body is dangerous for human life.

40

36

12

25

Decision:

An alternating current of the electric network with a voltage of 40 volts passing through the human

body is dangerous for human life. Electric current with a voltage of 40 volts and above is deadly for

humans.

3. According to the depth of the lesion, electric burns are divided into \_\_\_\_ degrees(s).

4  
5  
3  
2

Solution:

According to the depth of the lesion, electric burns are divided into 4 degrees.

4. Depending on the depth of tissue damage, there are \_\_\_\_\_ degrees(s) of electric burns.

4  
3  
2

5 Solution

:

Depending on the depth of tissue damage, there are 4 degrees of electric burns. Electric burns occur

from the action of an electric current, the contact of which with tissues, primarily with the skin, leads to

the transfer of electrical energy into thermal energy, resulting in coagulation (clotting and destruction of tissues).

5. Tissue damage caused by high temperature, chemicals, electricity or radiation is called ... burn

hyperthermia

overheating by

heat stroke

Decision:

Tissue damage caused by high temperature, chemicals, electricity or radiation is called a burn.

Burns are

accompanied by a pronounced pain syndrome: people with extensive burn surfaces and deep burns

develop shock phenomena.

Hyperthermia is a condition caused by the accumulation of excess heat in the human body and animals

with an increase in body temperature, caused by external factors that impede heat transfer to the external environment or increase the flow of heat from the outside. Hyperthermia occurs at maximum

stress of the physiological mechanisms of thermoregulation (sweating, dilation of skin vessels, etc.) and,

if the causes causing it are not eliminated in time, steadily progresses, ending at a body temperature of

about 41-42 ° C with heat stroke.

6. In case of thermal burn, first of all it is necessary ...

quickly remove the victim from the fire zone

apply a sterile bandage to the burn

urgently deliver the victim to a medical institution

moisten the burned area with alcohol

Solution: In

case of thermal burn, first of all, it is necessary to quickly remove the victim from the fire zone.

At the

same time, if a person's clothes catch fire, you need to take them off without delay or throw a blanket,

coat, bag, thereby stopping air access to the fire.

1. In case of a chemical burn, it is forbidden ... to

treat the skin with wet wipes,  
rinse the skin under a stream of water,  
quickly remove soaked clothes,  
make cold lotions

Decision:

In case of a chemical burn, it is forbidden to treat the affected skin with water-soaked tampons, napkins, since in this case chemical compounds are rubbed even more into the skin. In case of chemical burns, first of all, it is necessary to quickly remove soaked clothes, rinse the burn under running water. Chemicals must be washed off with a large amount of water from under the tap until the specific smell of the substance disappears, thereby preventing its effect on tissues and the body.

2. The alternating current of the electrical network with a voltage of \_\_\_\_ volts passing through the human body is dangerous for human life.

40

36

12

25

Decision:

An alternating current of the electric network with a voltage of 40 volts passing through the human body is dangerous for human life. Electric current with a voltage of 40 volts and above is deadly for humans.

3. According to the depth of the lesion, electric burns are divided into \_\_\_\_ degrees(s).

4

5

3

2

Solution:

According to the depth of the lesion, electric burns are divided into 4 degrees.

4. Depending on the depth of tissue damage, there are \_\_\_\_ degrees(s) of electric burns.

4

3

2

5 Solution

:

Depending on the depth of tissue damage, there are 4 degrees of electric burns. Electric burns occur from the action of an electric current, the contact of which with tissues, primarily with the skin, leads to the transfer of electrical energy into thermal energy, resulting in coagulation (clotting and destruction of tissues).

5. Tissue damage caused by high temperature, chemicals, electricity or radiation is called ... burn

hyperthermia

overheating by

heat stroke

Decision:

Tissue damage caused by high temperature, chemicals, electricity or radiation is called a burn. Burns are accompanied by a pronounced pain syndrome: people with extensive burn surfaces and deep burns develop shock phenomena.

Hyperthermia is a condition caused by the accumulation of excess heat in the human body and animals with an increase in body temperature, caused by external factors that impede heat transfer to the external environment or increase the flow of heat from the outside. Hyperthermia occurs at maximum stress of the physiological mechanisms of thermoregulation (sweating, dilation of skin vessels, etc.) and, if the causes causing it are not eliminated in time, steadily progresses, ending at a body temperature of about 41-42 ° C with heat stroke.

6. In case of thermal burn, first of all it is necessary ...  
quickly remove the victim from the fire zone  
apply a sterile bandage to the burn  
urgently deliver the victim to a medical institution  
moisten the burned area with alcohol

Solution: In

case of thermal burn, first of all, it is necessary to quickly remove the victim from the fire zone. At the same time, if a person's clothes catch fire, you need to take them off without delay or throw a blanket, coat, bag, thereby stopping air access to the fire.

7. An alternating current of the electric network with a force of \_\_\_\_ amperes passing through the human body is dangerous for human life.

0,05

0,01

0,015

0,02

Decision:

Dangerous to human life is an alternating current of the electric network with a power of 0.05 amperes passing through the human body. Touching the current-carrying parts can cause a burn of the body at the point of contact and even paralysis of the heart and respiratory organs. For alternating current of industrial frequency (50 Hz), the safe value is a current of 0.01 amperes. A current of 0.015 amperes causes painful sensations in a person.

8. In case of chemical burns of the skin with caustic alkalis, first of all, it is necessary to treat the skin ...

2% boric acid solution

5% solution of copper sulfate

with a 5% solution of baking soda

10% solution of copper sulfate

Solution: In

case of chemical burns of the skin with caustic alkalis, first of all, it is necessary to treat the skin with a

2% solution of boric acid. Boric acid is usually available in all universal first aid kits in powder form. In addition, solutions of other acids common in everyday life can be used: citric acid, table vinegar. 9. In case of chemical burns of the skin with phosphorus and its compounds, first of all, it is necessary to treat the skin ...

5% solution of copper sulfate

10% solution of baking soda

2% boric acid solution

with a 5% solution of baking soda

Solution: In

case of chemical burns of the skin with phosphorus and its compounds, first of all, it is necessary to treat

the skin with a 5% solution of copper sulfate.

10. If acid or its vapors get into the eyes or mouth, first of all, it is necessary to rinse the eyes and mouth

... with a

5% solution of baking soda

5% solution of copper sulfate

2% boric acid solution

10% copper sulfate solution

Solution:

If acid or its vapors get into the eyes or mouth, first of all, it is necessary to rinse the eyes and mouth

with a 5% solution of baking soda.

11. Local tissue damage with electric burn is manifested in 60% of victims in the form of ... signs of current

baldness

severe itching of

acute urticaria

Solution:

Local tissue damage during an electric burn is manifested in 60% of victims in the form of current signs

(tags). A current mark (electromark) is a skin change that occurs after an electric shock in the form of

rounded spots, dark inside and bluish on the periphery, mainly in the places of current input and output,

where electrical energy turns into thermal. The higher the voltage, the stronger the burns.

12. In case of thermal eye burn, first of all it is necessary ... to

make cold lotions from a 3% solution of boric acid,

put an ointment with an antibiotic behind the eyelids,

drip vaseline oil into the eyes,

make cold lotions from a 5% solution of copper sulfate

Decision:

In case of thermal eye burn, first of all it is necessary to make cold lotions from a 3% solution of boric

acid. To prepare this solution, it is necessary to dilute half a teaspoon of boric acid powder in a glass of

water. The burn surface should not be lubricated with various fats. This can cause even more harm to

the victim, since bandages with any fats, ointments, oils only pollute the burn surface and contribute to

the suppuration of the wound.

13. The increase in metabolic processes in the human body with a decrease in body temperature by 1 °

C is about \_\_\_\_% of the level of the basic metabolism.

10

15

5

20

Decision:

The increase in metabolic processes in the human body with a decrease in body temperature by 1 ° C is

about 10% of the level of the basic metabolism. The appearance of muscle trembling, in which external

work is not performed, and all energy is converted into heat, can delay the decrease in the temperature

of internal organs for some time. The result of the action of low temperatures are cold injuries.

Therefore, when signs of hypothermia appear (chills, muscle trembling, cyanosis of the skin, muscle

rigor), intensive physical exercises must be performed.

First aid in case of poisoning

1. When taking caustic soda and ammonia inside, it is urgently necessary ... to rinse the stomach through a thick rubber probe.

take an emetic

take activated charcoal

drink 0.5 cups of 2% baking soda solution

Decision:

When taking caustic soda and ammonia inside, it is urgently necessary to rinse the stomach through a

thick rubber probe. Cold water is used for washing. Burns with alkalis are characterized by a greater

depth of lesion, unlike burns with acids. It is not recommended to take emetics and laxatives.

Ulcers

covered with scab form at the site of contact of the skin or mucous membrane with alkali. The victim

should be hospitalized and antishock therapy should be started as soon as possible.

2. The pathological process that occurs as a result of exposure to harmful and toxic substances of various origins coming from the external environment through the mouth is called \_\_\_\_\_

poisoning.

food

inhalation

injection contact

Solution: The

pathological process that occurs as a result of exposure to harmful and toxic substances of various

origins coming from the external environment through the mouth is called food poisoning. The severity

of poisoning depends on the amount of the poison that has penetrated, the strength of its action, the

speed of absorption and other reasons.

3. The ability to remove poison from the body has ...

activated carbon hydrogen

peroxide

petroleum  
jelly sunflower oil

Decision:

Activated carbon, potassium permanganate, milk, egg whites have the ability to remove and neutralize

toxic substances. Activated carbon has a high absorption capacity to many toxic substances.

Take

activated charcoal (in an amount of at least 10 tablets) inside in the form of a water slurry (2-3 tablespoons per 1-2 glasses of water). Potassium permanganate is added to water to wash the skin and

stomach.

4. First aid in case of poisoning should begin with ... the definition of a poisonous substance

taking measures to remove the poison from the body

conducting antidote therapy

calling an ambulance

Solution: First

aid in case of poisoning should begin with the determination of the toxic substance, as a result of which

poisoning occurred, then immediately take measures to remove the poison from the body or neutralize

it with the help of antidotes, take measures to maintain the basic vital functions of the body; call an

ambulance.

5. In case of food poisoning, after cleansing the stomach, it is necessary ... to

take activated charcoal, go

out into the fresh air,

take antibiotics,

take an analgesic

Solution: In

case of food poisoning, after cleansing the stomach, it is necessary to take activated charcoal.

The

measures of the second stage, after cleansing the stomach, include taking activated charcoal, providing

rest to the victim, warming the victim (applying a heating pad to the legs), providing abundant drinking.

6. When the first signs of poisoning with harmful gases appear (headache, shortness of breath, palpitations, ringing in the ears, dizziness, pounding in the temples), it is necessary ... to go

out into the fresh air,

take an anesthetic,

take heart medications,

do breathing exercises

Solution:

When the first signs of poisoning with harmful gases appear, it is necessary to immediately remove or

take the victim to fresh air.

7. If the poison got through the skin, then the skin must be ...

washed with plenty of water,

liberally lubricated with vaseline,

sprinkled with activated carbon,

treated with hydrogen peroxide

Decision:

If the poison got through the skin, then it is necessary to wash the skin with plenty of water, saline solution, a weak solution of baking soda or citric acid solution (depending on the toxic substance).

8. The appearance of a heart rhythm disorder, up to cardiac arrest, dilation or constriction of the pupils

may be due to poisoning by \_\_\_\_\_ means.

cardiac and vascular

hypnotics and sedatives

antipyretic and anti-inflammatory

sulfonamide and antipyretic

Decision:

The appearance of a heart rhythm disorder, up to cardiac arrest, dilation or constriction of the pupils

may be due to poisoning with drugs for the treatment of various diseases of the cardiovascular system

(digitoxin, obsidan, isoptin, hemiton, clofelin), therefore, if poisoning is suspected, it is necessary to call

a doctor immediately. The victim should be hospitalized immediately and begin intensive therapy.

9. The appearance of signs of kidney and liver damage may be due to poisoning with \_\_\_\_\_ medications.

antipyretic

sleeping pills

cardiac sedatives

Decision:

The appearance of signs of kidney and liver damage may be due to poisoning with antipyretics (aspirin,

amidopyrine, paracetamol, analgin), sulfonamide preparations (ethazole, sulfadimethoxine); their overdose may cause poisoning accompanied by kidney and liver damage.

10. Gastric lavage during first aid in case of severe food poisoning should be carried out before ... obtaining clean washing waters

injection into the stomach of 2-3 liters of solution

injection into the stomach of 3-4 liters of solution the

appearance of a sense of relief

Decision:

Gastric lavage during first aid in case of severe food poisoning should be carried out until clean washing

waters are obtained. In total, 5-6 liters of solution may be required.

11. If mushroom poisoning is suspected or when its first symptoms appear, it is necessary ... to induce vomiting and do gastric lavage,

take an anesthetic,

take heart medications,

drink 0.5 cups of activated charcoal solution

Decision:

If mushroom poisoning is suspected or when its first symptoms appear, it is necessary to induce vomiting and perform gastric lavage. To do this, you should drink a large amount of liquid and irritate

the root of the tongue with your fingers, which will lead to reflex vomiting. After repeated rinsing,

activated carbon or carbolene should be taken inside. You can take white clay, milk, salt laxative. Lay the

victim down, warm his feet with the help of hot water bottles. Give a plentiful drink (tea, water is suitable for this). It is necessary to call an ambulance team and hospitalize the victim.

12. Headache, shortness of breath, palpitations, ringing in the ears, dizziness, pounding in the temples

are common signs of poisoning ... with

harmful gases,

technical liquids,

poisonous mushrooms,

acids and alkalis

Solution:

Headache, shortness of breath, palpitations, ringing in the ears, dizziness, pounding in the temples are

common signs of poisoning with harmful gases. In severe cases, muscle weakness, vomiting and general

convulsions with loss of consciousness are observed.

13. The severity of poisoning depends on the amount of poison that has entered the body, the strength

of its action, the speed of absorption ...

speed of recovery

quality of treatment

conditions of recovery

Decision:

The severity of poisoning depends on the amount of poison that has entered the body, the strength of

its action, and the speed of absorption. First aid for poisoning should be provided quickly and efficiently.

The outcome of poisoning usually depends on how quickly and effectively this assistance will be provided. Timely qualified measures in most cases guarantee the life of a person who has received

poisoning even with several lethal doses.

14. A toxic substance can enter the human body \_\_\_\_\_ ways.

four two

three five

Solution:

Toxic, the substance can enter the human body in four ways: through the respiratory tract, mouth, skin

and as a result of injection (when bitten by insects and animals, as well as when the drug is injected with

a syringe).

First aid for bruises, dislocations, sprains, ruptures and fractures

1. During traumatic toxicosis, there are \_\_\_\_ periods(s).

3

4

2

5 Solution

:

During traumatic toxicosis, there are 3 periods: early (immediately after the injury and within 2 hours

the affected person is excited, consciousness is preserved, asks for help); intermediate (after staying in

the blockage for 2 hours, toxic phenomena increase, excitement passes, the affected person becomes

relatively calm); late (the general condition deteriorates sharply, excitement, consciousness is disturbed, delirium, nausea, vomiting appears, death occurs in severe cases).

2. The appearance of pain, nausea, and sometimes vomiting after a head injury with retained consciousness are signs ...

brain injury

concussions of the brain

food poisoning

hypertension

Solution: The

appearance of pain, nausea, and sometimes vomiting after a head injury with retained consciousness

are signs of a brain injury.

3. A serious condition caused by the absorption into the blood of toxic substances that are products of

the disintegration of crushed soft tissues due to their prolonged compression is called ...

prolonged compression syndrome

endogenous toxicosis

infectious toxicosis

toxic kidney

Decision:

A serious condition caused by the absorption into the blood of toxic substances that are products of the

disintegration of crushed soft tissues due to their prolonged compression is called prolonged compression syndrome (traumatic toxicosis).

4. Depending on the severity of the course, there are \_\_\_\_\_ degrees(s) of traumatic shock.

4

5

3

2 Solution

:

Depending on the severity of the course, there are 4 degrees of traumatic shock: mild, moderate, severe

shock, extremely severe shock.

5. Bone fractures can be ...

open and closed

internal and external

light and heavy

strong and weak

Solution: Bone

fractures can be open and closed. With open fractures, the skin or mucous membranes are damaged.

Such injuries are usually accompanied by the development of purulent processes in soft tissues, bones,

and a general purulent infection. With closed fractures, the integrity of the skin and mucous membranes

is not violated, and they serve as a barrier preventing the penetration of infection into the fracture area.

6. Sharp pain, rapidly manifesting swelling, bruising, soreness of movements in the joint are signs of ...

sprains

dislocation of the joint bone

fracture  
soft tissue injury

Solution:

Sharp pain, rapidly manifested swelling, bruising, soreness of movements in the joint are signs of sprains.

8. The main danger in open bone fractures may be ...

traumatic shock  
infection of the wound  
damage to soft tissues  
damage to blood vessels

Decision:

The main danger in open bone fractures may be traumatic shock, the main cause of which is pain. Shock

is especially common in open fractures with arterial bleeding.

9. In the development of traumatic shock, there are \_\_\_\_ phases (s).

2

4

3

5

Solution:

In the development of traumatic shock, there are 2 phases: excitation and inhibition. The arousal phase

develops immediately after the injury as a response of the body to the strongest pain stimuli. It is followed by inhibition: with full consciousness, the victim becomes indifferent, inhibited.

10. Displacement of the articular surface of the bones relative to each other, accompanied by severe

pain, swelling, a change in the configuration of the joint, is a sign of ...

dislocation of the joint of a bone

fracture

soft tissue injury

sprains

Solution:

Displacement of the articular surface of the bones relative to each other, accompanied by severe pain,

swelling, a change in the configuration of the joint, is a sign of dislocation of the joint

## Test questions

### **Questions to test «Medicine of disasters»**

1. Tasks and organizational structure of the Unified State System of Prevention and Liquidation of Emergency situations.
2. Types and general characteristics of emergency situations.
3. Classification of disasters.
4. Types and general characteristics of natural disasters.
5. Types and general characteristics of man-made disasters.
6. Types and general characteristics of conflict disasters.
7. Damaging factors of sources of emergency situations.
8. Modes of functioning of the Unified State system of prevention and liquidation of emergency situations.
9. Tasks and organizational structure of the All-Russian Medical Service disasters (VSMK).
10. Regular and non-regular formations of the disaster medicine service, the order of their functioning.
11. The concept of development of sanitary aviation in the Russian Federation.
12. Fundamentals of the organization of medical evacuation provision of the population in emergency situations.
13. Types of medical care.
14. First aid, basic measures and the procedure for its provision.
15. Pre-medical (paramedic) medical care, the main measures and the procedure for rendering.
16. Urgent and delayed first aid measures.
17. Organization of assistance to victims of a traffic accident.
18. Stages of medical evacuation, deployment scheme and organization of its work.
19. Medical sorting of the affected in emergency situations.
20. Medical and tactical characteristics of foci of chemical disasters.
21. Organization of medical support for the population in the aftermath of chemical disasters.
22. Medical and tactical characteristics of the foci of radiation disasters.
23. Organization of medical support for the population in the aftermath of radiation disasters.
24. Medical and sanitary provision of the population in emergency situations of a transport nature.
25. Medical and sanitary provision of the population in the aftermath of explosions and fires.
26. Medical and sanitary provision of the population during the liquidation of the consequences of terrorist acts.

27. Organization of medical and sanitary provision of the population in the aftermath of earthquakes.
28. Organization of medical and sanitary provision of the population in the aftermath of floods.
29. Goals and objectives of sanitary and anti-epidemic provision of the population in emergency situations.
30. Characteristics of factors contributing to the development of epidemics in the emergency zone.
31. Organization of anti-epidemic measures in the epidemic focus of an emergency situation.
32. Regime-restrictive measures carried out in the epidemic focus, quarantine and observation, their brief description.
33. Preparation and organization of work of medical and preventive institutions in emergency situations.
34. The main activities carried out in health care facilities in case of a threat of an emergency.
35. Activities carried out in a medical institution in preparation for the mass reception of the affected.
36. Organization of evacuation of medical and preventive institutions to a safe zone.
37. Division into groups of patients who are in a medical facility according to the evacuation principle.
38. Brief description and classification of medical property.
39. The concept of a set and a set of medical equipment, their purpose.
40. Organization of medical supplies in the aftermath of emergencies.
41. Types of medical property reserves and their purpose.
42. Psychotraumatic factors of emergency situations.
43. Brief description of the periods of emotional and physiological state of people exposed to the damaging factors of emergency situations.
44. Features of the development of neuropsychiatric disorders in the population and rescuers in emergency situations.
45. Medical and psychological protection of the population and rescuers in emergency situations.
46. Participation of military medicine in emergency response.
47. Forces and means of military medicine used to eliminate the consequences of emergency situations.
48. The main tasks performed by medical and nursing teams the Medical Service of the Armed Forces in the aftermath of an emergency.
49. The main tasks performed by teams of specialized medical care (BSMP) of the medical service of the Armed Forces in the aftermath of an emergency.

50. The main tasks performed by the medical detachment of special purpose (MOSN) of the medical service of the Armed Forces in the aftermath of an emergency.
51. Individual respiratory protection equipment, their physiological and hygienic characteristics.
52. Principles of ventilation and oxygen therapy in the provision of emergency medical care in the field.
53. Skin protection products, their physiological and hygienic characteristics.
54. Personal protective equipment of the filtering type, their physiological and hygienic characteristics.
55. Individual protective equipment of insulating type, their physiological and hygienic characteristics.
56. Medical monitoring of gas mask training. Rules for the use of filtering and insulating gas masks.
57. Service personal protective equipment.
58. Organization and procedure of radiometric control. Radiometric monitoring devices. Permissible degrees of contamination of RV of various objects.
59. Tasks and procedure for assessing the radiation situation. Radiation reconnaissance devices.
60. Organization and procedure of dosimetric control. Dosimetric control devices. External radiation doses that do not lead to decrease in the working capacity of people.
61. The main factors of radiation hazard in accidents at nuclear power plants. Therapeutic and preventive measures in the hearth.
62. Methods of indication of toxic substances and AOXV. The procedure for assessing the chemical situation,
63. Means of indicating toxic substances and AOHV.
64. Organization and means of special treatment in foci and at the stages of medical evacuation.
65. Ionizing radiation: definition, types, biological effect
66. Acute radiation sickness
67. Chronic radiation sickness
68. Local radiation lesions
69. Lesions as a result of internal radioactive contamination
70. Radiation damage as a result of external general (total) irradiation
71. Medical means of prevention and assistance in chemical and radiation injuries
72. Forecasting the radiation situation. Calculation of possible sanitary losses in emergencies of peacetime and wartime
73. Measures of the medical service in the foci of chemical and radiation lesions
74. Medical and sanitary provision in the aftermath of chemical accidents.
75. Characteristics of natural emergencies. Fundamentals of the organization of medical and sanitary provision in the aftermath of natural disasters
76. Fundamentals of the organization of medical support in the aftermath of earthquakes.
77. Organization of medical care in floods.

78. Organization of medical care in forest and peat fires.
79. Medical and tactical characteristics of emergency situations of explosive and fire-hazardous nature.
80. Medical and tactical characteristics of road transport emergencies.
81. Medical and tactical characteristics of railway accidents.
82. Medical and tactical characteristics of aviation accidents and catastrophes.
83. Medical and tactical characteristics of accidents on water transport.
84. Features of medical and sanitary provision in case of terrorist acts.
85. Features of medical and sanitary provision in local armed conflicts.