

**QUESTIONS FOR THE END-OF-TERM
CREDIT ON FORENSIC MEDICINE IN SPECIALTY
"DENTISTRY"**

**DISCIPLINE "FORENSIC MEDICINE". PROCEDURAL AND
ORGANISATIONAL BASES OF FORENSIC MEDICAL
EXAMINATION IN THE REPUBLIC OF BELARUS**

1. Forensic Medicine, its content and objectives. Forensic medical examination. Interrelation between Forensic Medicine and other sciences. Methods used in Forensic Medicine.
2. Evolvement of Forensic Medicine and brief history of its development. The pioneers of Forensic Medicine.
3. Kinds of the medico-legal practice. Examination during the preliminary investigation and in court. Participation of the medico-legal expert in the investigative actions (examination of the scene and the corpse at the place of its detection, investigative experiment, etc.).
4. The definitions of the terms "an expert" and "a forensic medical (medico-legal) examination. The goal, tasks and objects of the medico-legal examinations. Types of medico-legal examinations.
5. Grounds and procedure for appointing and conducting an examination. Cases of mandatory appointing and conducting the medico-legal examinations.
6. Rights and duties of a forensic medical expert. Procedural grounds for recusation of an expert. Limits of competence of a forensic medical expert.

FORENSIC THANATOLOGY

7. Doctrine of death. Terminal conditions and their medico-legal significance. Clinical and biological death. Apparent death.
8. Pronouncement of death. Presumptive signs of death, their detection and medico-legal importance. Confirmatory (indisputable) signs of death. Rate of dying. Gross pathology of acute (rapid) and agonal (slow) death.
9. Concept of cause and genesis of death. Medico-legal classification of death (category, manner, nature of death).
10. Postmortem body cooling (algor mortis). Thermometry of a corpse. Phenomenon of postmortem partial (local) drying of tissues. Their medico-legal significance.
11. Postmortem lividity (livor mortis), phases and timing of its development. Methods of investigation, medico-legal significance.
12. Cadaveric rigidity (rigor mortis), its mechanism and typical progression, medico-legal significance.
13. Methods and means of estimation of the time of death.
14. Putrefaction of the body, medico-legal significance. The influence of the environmental conditions and other factors on the processes of putrefaction.

15. Preserving modes of late postmortem changes: mummification, adipocere formation, peat tanning, their medico-legal significance.
16. Development of the fauna and flora on the corpse. Animal scavenging. Medico-legal importance of late postmortem changes.
17. Reasons for medico-legal examination of corpses. Forensic (medico-legal) versus hospital (clinical) autopsies.
18. Documentation of the medic-legal examination of the dead body (Expert's report), its structure and content.
19. Specific features of medico-legal examination of the dismembered bodies, skeletonized bodies and skeletal remains. Methods of identification of the body. Particular features of the medico-legal examination of unknown persons' bodies.
20. Principles of construction of the medico-legal diagnosis and expert conclusions. Requirements imposed on expert conclusions.
21. Sudden death and its causes. Factors contributing to the sudden death of adults and children. The most common diseases leading to sudden death at different ages.
22. Key issues resolved at the examination of corpses of newborns. Evidences of neonatality, full-term pregnancy, maturity, livebirth, viability and lifetime after birth.
23. Violent death of neonates and its causes. Neonaticide: definition, types.
24. Definition of the concept and legal regulation of the incident scene investigation. Reasons and grounds for the crime scene examination, main purposes of the examination. The main tasks of the medico-legal expert or doctor-specialist at external examination of the corpse at the incident (death) scene.

MEDICO-LEGAL EXAMINATION OF MECHANICAL INJURIES

25. Mechanism of action of blunt objects on a body and the nature of caused damages.
26. Mechanism and medico-legal significance of abrasions.
27. Mechanism and medico-legal significance of bruises.
28. Types of wounds caused by blunt objects, their morphological features and medico-legal significance.
29. Characteristic of long bones fractures depending on the mechanism of their formation.
30. Basic types of blunt force fractures of the cranial vault.
31. Complications of injuries, their morphological characteristic.
32. Algorithm of bodily injury documentation.
33. Features of the self-inflicted injuries.
34. Injuries from falls on the plane.
35. Injuries caused by falls from heights.
36. Definition and classification of sharp objects. Mechanism of action of sharp objects.
37. Stab wounds, mechanism of formation and medico-legal significance.

38. Incised and chop wounds, mechanism of formation and medico-legal significance.
39. Motor vehicle injuries and their types.
40. Pedestrian trauma: mechanisms of formation and features of injuries at collision of the vehicle with the pedestrian.
41. Mechanisms of formation and features of injuries due to running a wheel over the body.
42. Mechanisms of formation and features of injuries of the occupants (driver and passengers) of the vehicle.
43. Railway injuries, its types, nature of the damage.
44. Aviation-related injuries and their types. Specific features of forensic medical examination and its value for determining the causes of aircraft accidents.
45. Firearms and their types. Ammunition. Mechanism of the shot, additional factors of the shot.
46. Types of the bullet action. Specific features of wound ballistics of modern ammunition.
47. Signs of contact gunshot wounds.
48. Traces of intermediate range shots on clothing and the body, their significance and methods of recognition.
49. Distant gunshot wounds. Distinguishing between entrance and exit wounds.
50. Injuries inflicted by birdshot or buckshot pellets.
51. Estimation of the gunshot wounds sequence. Establishing the possibility of self-inflicted gunshot wounds.
52. Explosive trauma, its specific features and morphological characteristics.

HEALTH DISORDERS AND DEATH FROM ACUTE ANOXIA AND DUE TO EXPOSURE TO CERTAIN EXTERNAL (PHYSICAL AND CHEMICAL) FACTORS

53. Concept of hypoxia and mechanical asphyxia. Types of mechanical asphyxia. Stages of mechanical asphyxia.
54. Characteristics of the general morphological features of mechanical asphyxia.
55. Medico-legal examination of hanging and ligature strangulation. Strangulation (ligature) mark in hanging and in ligature strangulation. Determination of antemortem origin of the strangulation mark.
56. Medico-legal diagnostics of the manual strangulation.
57. Compressive (traumatic) asphyxia: compression of the chest and abdomen, features of thanatogenesis, morphological signs.
58. Suffocation due to smothering, choking, aspiration of gastric contents, blood.
59. Drowning, its types, medico-legal diagnostics. Laboratory tests for drowning.
60. Death in the water, definition, main causes. Injuries on the corpses recovered from the water.
61. Signs of water immersion. Determination of the length of the corpse stay in the water.

62. Burns. Burn disease. Outcomes of burns. Issues resolved in the examination of burns. Determination of the damaging factor, area and degree of burns. Differences between flame burns and scalds.
63. Examination of bodies discovered in fire. Determination of antemortem action of the flame. Burning of corpses.
64. Systemic effect of heat on the organism. Heat stroke and sunstroke, thanatogenesis, autopsy findings.
65. Death from hypothermia, autopsy findings. Frostbites, their degree, morphological characteristics. Conditions contributing to death from hypothermia. Signs of freezing of a dead body.
66. Electrocution. Mechanisms of electric current action on the body. Conditions affecting the outcome of electrocution.
67. Morphology of electrocution: electrical mark, electrical burns, mechanical injuries. Mechanism of death in electrocutions. Features of the crime scene investigation and medico-legal examination. Injury by lightning, thanatogenesis, diagnostics.
68. Effect of high and low gas pressure environment on the body. Health disorders and death due to changes of the partial pressure of gases. Decompression (caisson) disease (aeroembolism). Mountain (altitude) sickness. Autopsy procedures to diagnose gas embolism and pneumothorax.
69. Poisons: definition and medico-legal classification. Factors modifying action of poisons.
70. Poisonings, their origin. Course of poisonings. Drug addiction and glue sniffing.
71. Medico-legal diagnostics of poisonings. Specific features of accident (death) scene investigation in case of suspected poisoning. Sampling a material for chemical, biochemical, histologic, botanical, etc. examinations. Expert interpretation of postmortem toxicology tests.
72. Characteristic of the fatal poisonings with acids and alkalis. Characteristic of the fatal poisonings with heavy metals salts and arsenic.
73. Characteristic of the fatal poisonings with carbon monoxide and other poisons changing the composition and properties of blood.
74. Characteristic of the fatal poisonings with cyanides, hydrogen sulfide, carbon dioxide.
75. Characteristic of the fatal poisonings with narcotic substances (morphine, heroin, methadone, methamphetamine, cocaine).
76. Medico-legal diagnostics of death from alcohol intoxication. Value of quantitative analysis of alcohol in blood, urine and other liquids, organs and tissues for poisoning diagnostics.
77. Food poisonings, classification, features of a medico-legal examination.

MEDICO-LEGAL EXAMINATIONS OF THE LIVING PERSONS

78. Reasons for medico-legal examination of victims, suspects, defendants and others, its organization and conducting.
79. Examination for determining the severity of injuries: procedure of examination, resolved issues. Legal classification of injuries by degree of severity.
80. Criteria of grave bodily injuries.
81. Criteria of injuries of average gravity.
82. Criteria of light bodily injuries.
83. Examination of health condition: simulation, dissimulation, aggravation, disaggravation, artificial disease, self-mutilation.
84. Medico-legal determination of age: reasons, methodology of examination.

PERSONAL IDENTIFICATION

85. General principles and methods of personal identification.
86. Forensic methods of identification using dental status.
87. Personal identification by specific features of the structure of the teeth and dentition.
88. Determination of the gender, age and racial characteristics by teeth.

LEGAL ASPECTS OF THE PROFESSIONAL ACTIVITY OF MEDICAL PROFESSIONAL. MEDICO-LEGAL EXAMINATIONS IN CASES OF PROFESSIONAL AND OFFICIAL CRIMES OF MEDICAL STAFF

89. Medical duty of confidentiality: legal and medical aspects. Consequences of violating the patient-safety principles by medical professionals.
90. Definitions of crime and offence; actions committed negligently; justified risk; extreme necessity.
91. Medical errors and accidents in medical practice.
92. Professional and official crimes and offenses of medical and pharmaceutical workers and their responsibility under the Criminal Code of the Republic of Belarus.
93. Organization and conducting of the forensic dental examination in investigation of cases of criminal responsibility of medical professionals in connection with their professional activities.

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