

### **Exercise № 1**

#### **CARDIOPULMONARY RESUSCITATION**

1. Definition.
2. ATLS and ACLS guidelines.
3. Techniques of artificial respiration:
  - a) mouth to mouth
  - b) mouth to nose
4. External cardiac massage.
5. ATLS guidelines

Practical work:

1. Demonstration of artificial respiration and external cardiac massage on a mannequin.

### **Exercise № 2**

#### **ANTIDOTES. MECHANISM OF ACTION.**

1. Classification.
2. Mechanism of action
3. Major systemic antidotes
4. Related antidotal mechanisms

Practical work:

1. Discussion of well-known drugs

### **Exercise № 3**

#### **Toxic effects of anticholinesterase pesticides. Toxic effects of carbon monoxide and cyanide. Differential diagnosis.**

1. Mechanism of action.
2. Signs and symptoms of poisonings.
3. Diagnosis and Differential diagnosis.

4. Treatment of poisonings.
5. Practical work:
  - a) Qualitative determination of Cyanide

#### **Exersice № 4**

##### **Pulmonary edema-inducing compounds. Toxicology of solvents.**

1. Mechanism of action.
2. Signs and symptoms of poisonings.
3. Diagnosis and Differential diagnosis.
4. Treatment of poisonings.
5. Differential diagnosis of coma due to exogenous intoxications.

#### **Exersice № 5**

##### **Colloquium on Toxicology. Nuclear radiation incidents.**

1. Colloquium ( test and oral examination)
2. Prognosis and assessment of radioactive situation as a result of nuclear incident (nomograms).

#### **Exersice № 6**

##### **TOTAL BODY RADIATION SYNDROMES**

1. Bone Marrow Syndrome
  - a) I Model (radiation purpura) – description
2. Gastrointestinal Syndrome
  - a) II Model - radiomucositis (oral mucosa) - description
  - b) III Model - intestinal mucosa - description
3. Central Nervous System Syndrome
  - a) Histopathological changes

4. Radiation Dermatitis

5. Treatment of acute radiation syndromes

### **Exersice № 7**

#### **LATE EFFECTS OF IONIZING RADIATION. TEST RADIOBIOLOGY.**

1. Somatic effects:

2. Genetic effects:

Practical work:

a) Measurement of Effective dose Equivalent (EDE) and cancer risk.

b) Pictures of chromosomal aberrations.

3. Test in Radiobiology