**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:
6. 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