

Test database KROK-2 “Infectious diseases”

The correct answer is distractor A

Content module 1. Introduction to Infectology. Fecal-oral infectious diseases

Topic 1. Introduction to the course of infectious diseases. General characteristics of a group of Fecal-oral infectious diseases. Typhoid fever.

1. A 28 y.o. male patient was admitted to the hospital because of high temperature 39 C, headache, generalized fatigue, constipation, sleep disorder for 9 days. There are sporadic roseolas on the abdomen, pulse- 78 bpm, liver is enlarged for 2 cm. What is the most probable diagnosis?

- A. abdominal typhoid
- B. sepsis
- C. typhus
- D. leptospirosis
- E. brucellosis

2. A 28 year old patient was admitted to the clinic with complaints of the temperature rise up to 39,0 C, headache, weakness, constipation on the 9th day of the disease. On examination: single roseolas on the skin of the abdomen are present. The pulse rate is 78 bpm. The liver is enlarged by 2 cm. What is the most probable diagnosis?

- A. typhoid fever
- B. leptospirosis
- C. malaria
- D. sepsis
- E. brucellosis

3. A 50 year old locksmith was diagnosed with typhoid fever. The patient lives in a separate apartment with all facilities. Apart of him there are also 2 adults in his family. What actions should be taken about persons communicating with the patient?

- A. bacteriological study
- B. dispensary observation
- C. isolation
- D. antibiotic prophylaxis
- E. vaccination

4. A 40-year-old patient has a high fever for 8 days, severe headache, and a tendency to constipation. Objectively: temperature 39.5°C, pale, lethargic, adynamic. Pulse rate is 82 per minute. The tongue is dry, covered with a brown coating, single rosacea on the abdominal skin. The abdomen is moderately distended, painful in the right hypochondrium. The liver protrudes 2 cm. What is the most likely diagnosis?

A: Typhoid fever

- B: Typhus
- C: Sepsis
- D: Tuberculosis
- E: Brucellosis

5. A 32-year-old woman complains of fever, headache, severe weakness, and insomnia. She has been ill for 8 days. On examination: T - 39.8°C, Ps - 86/min, BP - 90/60 mm Hg. The skin is pale. Single rosea on the abdomen. The tongue is dry, covered with plaque, with tooth marks on the lateral surface. The abdomen is soft, there is a blunted percussion sound in the ileocecal region. Hepatosplenomegaly. What is the most likely diagnosis?

- A: Typhoid fever
- B: Sepsis
- C: Typhus
- D: Influenza
- E: Mycobacterium tuberculosis

Topic 2. Cholera. Salmonellosis. Shigellosis.

1. The disease began acutely. The frequent watery stool developed 6 hours ago. The body's temperature is normal. Then the vomiting was joined. On examination: his voice is hoarse, eyes are deeply sunken in the orbits. The pulse is frequent. Blood pressure is low. There is no urine. What is the preliminary diagnosis?

- A. cholera
- B. typhoid fever
- C. toxic food-borne infection
- D. dysentery
- E. salmonellosis

2. A man in grave condition was delivered to the admission ward of a hospital on the 2nd day of illness. Examination revealed body temperature of 36.1°C, sharpened features of face, dry skin that makes a fold, aphonia, convulsive twitching of some muscle groups. Acrocyanosis is present. Heart sounds are muffled, Ps is 102 bpm, AP is 50/20 mm Hg. Abdomen is soft, drawn-in, painless. Anuria is present. Stool is liquid in form of rice water. What is the most probable diagnosis?

- A. cholera
- B. salmonellosis
- C. escherichiosis
- D. intestinal amebiasis
- E. acute dysentery

3. A 30-year-old patient was delivered to the admission ward of the infectious disease department. The disease had started acutely on the background of normal temperature with the appearance of frequent, liquid, profuse stool without pathological impurities. Diarrhea was not accompanied by abdominal pain. 12 hours later there appeared recurrent profuse vomiting. The patient rapidly developed dehydration. What is the most likely diagnosis?

- A. cholera
- B. campylobacteriosis
- C. shigellosis
- D. staphylococcal food toxicoinfection
- E. salmonellosis

4. A 10 month old boy has been ill for 5 days after consumption of unboiled milk. Body temperature is 38-39 C, there is vomiting, liquid stool. The child is pale and inert. His tongue is covered with white deposition. Heart sounds are muffled. Abdomen is swollen, there is borborygmus in the region of umbilicus, liver is enlarged by 3 cm. Stool is liquid, dark-green, with admixtures of mucus, 5 times a day. What is the most probable diagnosis?

- A. salmonellosis
- B. rotaviral infection
- C. acute shigellosis
- D. staphylococcal enteric infection
- E. escherichiosis

5. A nurse of the kindergarten was taken to the hospital with complaints of acute pain in periumbilical region, convulsions of lower limbs, multiple bile vomiting, frequent watery foul feces of green colour in huge amounts. At the same time all the staff in the kindergarten got ill. Two days ago all of them ate cottage cheese with sour cream. General condition of patients is of moderate severity. Temperature 38,2 C. Heart tones: rhythmic and muted. Heart rate 95/min, arterial pressure: 160 mm/Hg. Abdomen is slightly swollen, painful. Liver +2 cm. What is the most likely diagnosis?

- A. salmonellosis
- B. cholera
- C. enterovirus infection
- D. food toxic infection
- E. dysentery

6. A 36-year-old man developed a disease with acute onset 6 hours ago. The patient presents with pain in the epigastric, ileocecal, and periumbilical areas, vomiting, weakness, nausea, and body temperature of 38,5 C. Stool is liquid, profuse, frequent, retains fecal nature, foul-smelling, frothy, colored dark green. The stomach is moderately distended and painful on palpation. The patient attributes his disease to eating raw chicken eggs one day before the clinical signs of the disease appeared. What is the most likely diagnosis?

- A. salmonellosis
- B. shigellosis
- C. typhoid fever
- D. cholera
- E. food toxicoinfection

7. A 6-year-old child complains of frequent liquid stool and vomiting. On the 2nd day of disease the child presented with inertness, temperature rise up to 38,2 C, Ps- 150 bpm, scaphoid abdomen,

palpatory painful sigmoid colon, defecation 10 times a day with liquid, scarce stool with mucus and streaks of green. What is a provisional diagnosis?

- A. shigellosis
- B. salmonellosis
- C. yersiniosis
- D. escherichiosis
- E. intestinal amebiasis

8. A 28-year-old man became acutely ill with chills and fever up to 38.50 C, spasmodic pain in the left hypochondrium, frequent loose stools with mucus and blood in the stool. Abdominal palpation reveals tenderness and spasm of the sigmoid colon. of the sigmoid colon is noted. What is the most likely diagnosis?

- A. Shigellosis
- B. Amoebiasis
- C. Escherichiosis
- D. Ulcerative colitis
- E. Malignant tumor of the colon

9. A 30-year-old patient complains of pain in the lower abdomen of an attacking nature, frequent liquid stools up to 10 times a day. In the first 3 days there was a high fever, from the 2nd day of the disease - liquid scanty stool with mucus. On palpation: tenderness of all segments of the large intestine. Sigma is spasmodic. What is the preliminary diagnosis?

- A. Shigellosis
- B. Intestinal amoebiasis
- C. Salmonellosis
- D. Cholera
- E. Balantidiasis

10. A 6-year-old child complains of frequent liquid stool and vomiting. On the 2nd day of disease the child presented with inertness, temperature rise up to 38,2 C, Ps- 150 bpm, scaphoid abdomen, palpatory painful sigmoid colon, defecation 10 times a day with liquid, scarce stool with mucus and streaks of green. What is a provisional diagnosis?

- A. shigellosis
- B. salmonellosis
- C. yersiniosis
- D. escherichiosis
- E. intestinal amebiasis

Topic 3. Botulism. Foodborne Toxic Infections.

1. An 18-year-old adolescent bought at a store a salad with smoked fish, mushrooms, and mayonnaise. Six hours after eating the salad, he developed progressive weakness, vision impairment, "fog in the

eyes", and problems with swallowing. He was hospitalized. Examination detects the body temperature of 36.0°C and pale skin and mucosa. The patient is adynamic, answers questions sluggishly. The pupils are dilated, with reduced response to light. The patient's voice is hoarse, his oral mucosa is dry. What type of food poisoning can be suspected in this case?

- A. Botulism
- B. Salmonellosis
- C. Mushroom poisoning
- D. Fish poisoning
- E. Staphylococcal intoxication

2. During the study of several cases of botulism that occurred in one group of people (5 people fell ill), it was determined that the patients were eating various dishes, among which were several types of cheese, pork stew, fried potatoes, homemade salted fish, and salads from fresh vegetables. What food is the most likely cause of the disease?

- A. Homemade salted fish
- B. Salads
- C. Cheese
- D. Fried potatoes
- E. Pork stew

3. In the morning a patient had nausea, abdominal discomfort, single vomiting, dry mouth. In the evening, the patient presented with the increasing general weakness, double vision, difficult swallowing of solid food. Objectively: ptosis, mydriasis, anisocoria, absence of gag and pharyngeal reflex, dry mucous membranes. The previous evening the patient had dinner with canned food and alcohol. What is the presumptive diagnosis?

- A. botulism
- B. acute ischemic stroke
- C. food toxicoinfection
- D. intoxication with unknown poison
- E. poliomyelitis

4. A 12-year-old boy presents with nausea, frequent repeated vomiting that first occurred after eating canned vegetables. Objectively: the patient has dry mucous membranes, muscular hypotonia, anisocoria, mydriasis, dysphagia and dysarthria. What is the most likely diagnosis?

- A. botulism
- B. salmonellosis
- C. yersiniosis
- D. cholera
- E. shigellosis

5. A patient, who had eaten canned mushrooms (honey agaric) three days ago, developed vision impairment (diplopia, mydriasis), speech disorder, disturbed swallowing. What type of food poisoning occurred in the patient?

- A. botulism
- B. food toxicoinfection
- C. fusariotoxycosis
- D. honey agaric poisoning
- E. lead salts poisoning

6. The patient 25 y.o. was admitted on the 1st day of the disease with complaints of double vision in the eyes, heavy breathing. The day before the patient ate home-made mushrooms. On objective examination: paleness, widened pupils, disorder of swallowing, bradycardia, constipation are marked. What is the diagnosis?

- A. botulism
- B. salmonellosis, gastrointestinal form
- C. leptospirosis
- D. yersiniosis
- E. lamblasis

7. An outbreak of food poisoning was recorded in an urban settlement. The illness was diagnosed as botulism on the grounds of clinical presentations. What foodstuffs should be chosen for analysis in the first place in order to confirm the diagnosis?

- A. tinned food
- B. pasteurized milk
- C. boiled meat
- D. cabbage
- E. potatoes

8. The 25 year old patient was admitted on the 1st day of the disease with complaints of double vision in the eyes, difficult respiration. The day before the patient ate home-made mushrooms. On objective examination: paleness, widened pupils, disorder of swallowing, bradycardia, constipation are marked. What is the diagnosis?

- A. botulism
- B. lamblasis
- C. yersiniosis
- D. leptospirosis
- E. salmonellosis, gastrointestinal form

9. In the morning a patient had nausea, abdominal discomfort, single vomiting, dry mouth. In the evening, the patient presented with the increasing general weakness, double vision, difficult swallowing of solid food. Objectively: ptosis, mydriasis, anisocoria, absence of gag and pharyngeal reflex, dry mucous membranes. The previous evening the patient had dinner with canned food and alcohol. What is the presumptive diagnosis?

- A. botulism
- B. acute ischemic stroke
- C. food toxicoinfection

- D. intoxication with unknown poison
- E. poliomyelitis

10. A 12 year old girl complains about abrupt weakness, nausea, dizziness, vision impairment. The day before she ate home-made stockfish, bee Examination revealed skin pallor, a scratch on the left knee, dryness of mucous membranes of oral pharynx, bilateral ptosis, mydriatic pupils. The girl is unable to read a simple text (mist over the eyes). What therapy would be the most adequate in this case?

- A. parenteral introduction of polyvalent antitoxin serum
- B. gastric lavage
- C. parenteral disintoxication
- D. parenteral introduction of antitetanus serum
- E. parenteral introduction of antibiotics

Topic 4 and 5. Helminthiases (nematodosis, cestodiasis). Helminthiasis (trematode infections). Opisthorchosis as an endemic disease.

1. A 4 y.o. child attends the kindergarten. Complains of poor appetite, fatigue. Objective examination: skin and mucous membrane are pale, child is asthenic. In the hemogram: hypochromatic anemia 1st, leucocytosis reaction of the eosinophile type. What pathology must be excluded first of all?

- A. helminthic invasion
- B. lymphoproliferative process
- C. duodenal ulcer
- D. atrophic gastritis
- E. hypoplastic anemia

2. A 30-year-old patient was hospitalized with a diagnosis: intestinal obstruction. During the surgery it was revealed that the obstruction of the small intestine had been caused by a mass of helminths. What helminths are these?

- A. ascarids
- B. guinea worms
- C. cysticerci
- D. filarial worms
- E. pinworms

3. A female patient has been suffering from pain in the right subcostal area, bitter taste in the mouth, periodical bile vomiting for a month. The patient put off 12 kg. Body temperature in the evening is 37, 6 o C . Sonography revealed that bile bladder was 5,5x2,7 cm large, its wall 0,4 cm, choledochus - 0,8 cm in diameter. Anterior liver segment contains a roundish hypoechoic formation up to 5 cm in diameter and another two up to 1,5 cm each, walls of these formations are up to 0,3 cm thick. What is the most likely diagnosis?

- A. Alveolar echinococcus of liver
- B. Liver cancer

- C. Liver abscess
- D. Cystous liver cancer
- E. Paravesical liver abscesses

4. A 32-year-old patient lives in an area endemic for echinococcosis. In the last 6 months he reports of pain in the right subcostal area, fever. He is suspected to have liver echinococcosis. What study would be the most informative in this case?

- A. USI
- B. Survey radiography of abdominal cavity
- C. Biochemical laboratory examination
- D. Angiography
- E. Liver scanning

5. A 20-year-old man was hospitalized on the 91st day of the disease. He attributes his disease to eating of insufficiently thermally processed pork. At its onset this condition manifested as periorbital edemas and fever. Objectively his body temperature is 38,5°C. The face is puffy and the eyelids are markedly swollen. Palpation of gastrocnemius muscles is sharply painful. Blood test shows hypereosinophilia. What is the etiology of this disease?

- A. Trichinella
- B. Echinococci
- C. Leptospira
- D. Ascarididae
- E. Trichuris

6. A dweller of the northern Dnieper area, a fisherman, for the last several days has been complaining of a discomfort in his right subcostal region, periodical episodes of diarrhea, intermittent with constipations, frequent skin rashes. Abdominal ultrasound shows enlarged liver and pancreatic head. Make the provisional diagnosis:

- A. Opisthorchiasis
- B. Onchocerciasis
- C. Ornithosis
- D. Trichinellosis
- E. Taeniasis

7. A 30-year-old patient has been hospitalized with diagnosis of intestinal obstruction. The surgery revealed the obstruction of the small intestine to be caused by a helminth ball. What kind of helminth is it?

- A. ascaris
- B. guinea worm
- C. filariidae
- D. cysticercus
- E. pinworm

8. Examination of pork detected 2 trichinella in 24 sections on the compressorium. What should be done with this meat?

- A. Technically utilized
- B. Cut into small pieces and boiled
- C. Deep frozen
- D. Used in public catering networks
- E. Used to make sausages

9. A person has been hospitalized with the diagnosis of trichinellosis. What food product is the likely cause of this helminthiasis?

- A. Pork
- B. Rabbit
- C. Beef
- D. Poultry
- E. Mutton

10. A 20-year-old man was hospitalized on the 9th day of the disease. He attributes his disease to eating of insufficiently thermally processed pork. At its onset this condition manifested as periorbital edemas and fever. Objectively his body temperature is 38.5°C. The face is puffy and the eyelids are markedly swollen. Palpation of gastrocnemius muscles is sharply painful. Blood test shows hypereosinophilia. What is the etiology of this disease?

- A. Trichinella
- B. Leptospira
- C. Trichuris
- D. Echinococci
- E. Ascarididae

Topic 6. Emergencies in patients with fecal-oral infectious diseases

1. A 40-year-old patient has a high fever for 8 days, severe headache, and a tendency to constipation. Objectively: temperature 39.5°C, pale, lethargic, adynamic. Pulse rate is 82 per minute. The tongue is dry, covered with a brown coating, single rosacea on the abdominal skin. The abdomen is moderately distended, painful in the right hypochondrium. The liver protrudes 2 cm. What is the most likely diagnosis?

- A: Typhoid fever
- B: Typhus
- C: Sepsis
- D: Tuberculosis
- E: Brucellosis

2. A 32-year-old woman complains of fever, headache, severe weakness, and insomnia. She has been ill for 8 days. On examination: T - 39.8°C, Ps - 86/min, BP - 90/60 mm Hg. The skin is pale. Single rosacea on the abdomen. The tongue is dry, covered with plaque, with tooth marks on the lateral surface. The

abdomen is soft, there is a blunted percussion sound in the ileocecal region. Hepatosplenomegaly. What is the most likely diagnosis?

- A: Typhoid fever
- B: Sepsis
- C: Typhus
- D: Influenza
- E: Mycobacterium tuberculosis

3. In the morning a patient had nausea, abdominal discomfort, single vomiting, dry mouth. In the evening, the patient presented with the increasing general weakness, double vision, difficult swallowing of solid food. Objectively: ptosis, mydriasis, anisocoria, absence of gag and pharyngeal reflex, dry mucous membranes. The previous evening the patient had dinner with canned food and alcohol. What is the presumptive diagnosis?

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- A. botulism
- B. salmonellosis
- C. yersiniosis
- D. cholera
- E. shigellosis

5. A 30-year-old patient was delivered to the admission ward of the infectious disease department. The disease had started acutely on the background of normal temperature with the appearance of frequent, liquid, profuse stool without pathological impurities. Diarrhea was not accompanied by abdominal pain. 12 hours later there appeared recurrent profuse vomiting. The patient rapidly developed dehydration. What is the most likely diagnosis?

- A. cholera
- B. campylobacteriosis
- C. shigellosis
- D. staphylococcal food toxicoinfection
- E. salmonellosis

6. A 10 month old boy has been ill for 5 days after consumption of unboiled milk. Body temperature is 38-39 C, there is vomiting, liquid stool. The child is pale and inert. His tongue is covered with white deposition. Heart sounds are muffled. Abdomen is swollen, there is borborygmus in the region of

umbilicus, liver is enlarged by 3 cm. Stool is liquid, dark-green, with admixtures of mucus, 5 times a day. What is the most probable diagnosis?

- A. salmonellosis
- B. rotaviral infection
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- D. staphylococcal enteric infection
- E. escherichiosis

7. A nurse of the kindergarten was taken to the hospital with complaints of acute pain in periumbilical region, convulsions of lower limbs, multiple bile vomiting, frequent watery foul feces of green colour in huge amounts. At the same time all the staff in the kindergarten got ill. Two days ago all of them ate cottage cheese with sour cream. General condition of patients is of moderate severity. Temperature 38,2 C. Heart tones: rhythmic and muted. Heart rate 95/min, arterial pressure: 160 mm/Hg. Abdomen is slightly swollen, painful. Liver +2 cm. What is the most likely diagnosis?

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8. A dweller of the northern Dnieper area, a fisherman, for the last several days has been complaining of a discomfort in his right subcostal region, periodical episodes of diarrhea, intermittent with constipations, frequent skin rashes. Abdominal ultrasound shows enlarged liver and pancreatic head. Make the provisional diagnosis:

- A. Opisthorchiasis
- B. Onchocerciasis
- C. Ornithosis
- D. Trichinellosis
- E. Taeniasis

9. A 30-year-old patient has been hospitalized with diagnosis of intestinal obstruction. The surgery revealed the obstruction of the small intestine to be caused by a helminth ball. What kind of helminth is it?

- A. ascaris
- B. guinea worm
- C. filariidae
- D. cysticercus
- E. pinworm

10. A 6-year-old child complains of frequent liquid stool and vomiting. On the 2nd day of disease the child presented with inertness, temperature rise up to 38,2 C, Ps- 150 bpm, scaphoid abdomen, palpatory painful sigmoid colon, defecation 10 times a day with liquid, scarce stool with mucus and streaks of green. What is a provisional diagnosis?

- A. shigellosis
- B. salmonellosis
- C. yersiniosis
- D. escherichiosis
- E. intestinal amebiasis

Content module 2. Infectious diseases with airborne transmission mechanism

Topic 7 General characteristics of the group of infectious diseases with an airborne transmission mechanism. Influenza and other acute respiratory viral infections. COVID-19.

1. A patient, aged 16, complains of headache, mainly in the frontal and temporal areas, superciliary arch, appearing of vomiting at the peak of headache, pain during the eyeballs movement, joints pain. On examination: excited, to- 39 C, Ps- 110/min. Tonic and clonus cramps. Uncertain meningeal signs. What is the most likely diagnosis?

- A. influenza with cerebral edema manifestations
- B. adenovirus infection
- C. parainfluenza
- D. influenza, typical disease duration
- E. respiratory syncytial virus

2. Ambulance brought to the hospital a patient with acute respiratory viral infection. The illness began suddenly with temperature rise up to 39,9 C. He complains of headache in frontotemporal lobes, pain in eyeballs, aching of the whole body, nose stuffiness, sore throat, dry cough. At home he had a nasal hemorrhage twice. What type of acute respiratory viral infection is it?

- A. influenza
- B. enterovirus infection
- C. adenoviral infection
- D. parainfluenza
- E. RS-infection

3. A 28 y.o. patient who has no permanent residence was admitted to the hospital with preliminary diagnosis "influenza", on the 5-th day of disease there are appeared maculopapular and petechial rash on his body and internal surfaces of his extremities. Body temperature is 41 C, euphoria, hyperemic face, scleras reddening, tongue tremor, tachycardia, splenomegaly, excitement. What is the most probable diagnosis?

- A. spotted fever
- B. delirium alcoholicum
- C. leptospirosis
- D. typhoid fever
- E. measles

4. On the next day after being taken by influenza a 46-year-old woman presented with intensified headache, dizziness, nausea. Objectively: the patient is conscious, psychomotor excitement is present; there is general hyperesthesia, moderate meningeal syndrome, nystagmus. Tendon reflexes are higher on the right, right extremities display muscle weakness, right-sided pathological Babinski sign is present. Liquor is transparent, pressure is 220 mm of water column; cytosis is 46/3 with prevailing lymphocytes. What is the most likely diagnosis?

- A. influenzal meningoencephalitis
- B. subarachnoidal haemorrhage
- C. bacterial meningoencephalitis
- D. ischemic stroke
- E. parenchymatous subarachnoidal haemorrhage

5. During winter epidemics of influenza caused predominantly by virus A/California/04/2009 (H1N1), on the 2nd day after the disease onset a 30-year-old hospitalized man presented with high fever, dry cough, myalgia, headache, and general weakness. What should be prescribed as etiotropic treatment in this case?

- A. Neuraminidase inhibitors (Oseltamivir)
- B. Antibiotics
- C. Immunoglobulin
- D. Interferon inducers
- E. Acyclov

6. A 65-year-old woman was diagnosed with the following: chronic rheumatic heart disease, I degree of rheumatic activity; combined mitral heart disease with prevalence of III degree stenosis; heart failure IIA with retained left ventricular ejection fraction, functional class III (NYHA). What tactics of vaccination against respiratory infections should be chosen to provide secondary prevention of exacerbations and to avoid heart failure decompensation in this patient?

- A. Scheduled yearly vaccination against influenza and pneumococci
- B. Vaccination is contraindicated due to severe heart failure
- C. Vaccination should be combined with antibiotic administration
- D. Any vaccination is contraindicated due to elderly age of the patient
- E. Any vaccination is contraindicated due to mitral valve disease

7. A 69-year-old woman was diagnosed with the following: ischemic heart disease; stable exertional angina pectoris, FC III; heart failure IIA with retained left ventricular ejection fraction, functional class III (NYHA). What vaccine should be chosen for influenza prevention and to avoid destabilization of the patient's condition?

- A. Type of influenza vaccine is not important
- B. Recombinant influenza vaccine (RIV)
- C. Vaccination is contraindicated due to elderly age of the patient
- D. Vaccination is contraindicated due to severe heart failure
- E. Inactivated influenza vaccine (IIV)

8. A 60-year-old man presents with subcompensated viral liver cirrhosis (HCV), Child-Pugh class B. What tactics should be chosen regarding the vaccination against influenza in this case?

- A. Scheduled yearly vaccination
- B. Contraindicated due to disease progression stage, as shown by Child-Pugh class
- C. Contraindicated due to elderly age of the patient
- D. In case of influenza outbreak
- E. Combined with antiviral drugs

9. A 28-year-old woman has made an appointment with the family doctor to receive vaccination against influenza. However, having collected the patient's medical history, the doctor claimed this procedure to be absolutely contraindicated for this woman. What anamnestic data is the absolute contraindication to vaccination?

- A. Egg white intolerance
- B. Body temperature - 37.2°C
- C. Psoriasis in the remission phase
- D. Pregnancy at 30 weeks
- E. Blood hemoglobin - 109 g/L

10. Ambulance brought to the hospital a patient with acute respiratory viral infection. The illness began suddenly with temperature rise up to 39.9°C. He complains of headache in frontotemporal lobes, pain in eyeballs, aching of the whole body, nose stuffiness, sore throat, dry cough. At home he had a nasal hemorrhage twice. What type of acute respiratory viral infection is it?

- A. influenza
- B. enterovirus infection
- C. adenoviral infection
- D. parainfluenza
- E. RS-infection

Topic 8. Herpesvirus infections of 1-5 types (herpes simplex, chickenpox and herpes zoster, EBV and cytomegalovirus infections (infectious mononucleosis)).

1. The doctor has an appointment with a patient, who 2 days ago developed severe chest pain on the left, general weakness, high temperature, and headache. Objectively along the 4th and 5th intercostal nerves on the left the skin is hyperemic and there are tight clusters of small vesicles with clear serous content. What is the most likely diagnosis?

- A. Herpes zoster
- B. Streptococcal impetigo
- C. Dermatitis herpetiformis (Dühring's disease)
- D. Pemphigus
- E. Herpes simplex

2. A 24-year-old man has developed increasing headaches, vertigo, diplopia, paresis of the facial muscles on the right, choking during swallowing. The signs appeared on the 5th day of respiratory disorder. He was diagnosed with acute viral encephalitis. Determine the main direction of emergency therapy:

- A. Zovirax (Aciclovir)
- B. Neohaemodes
- C. Lasix (Furosemide)
- D. Ceftriaxone
- E. Glucocorticoids

3. . In a 5-year-old child, the disease onset was acute, with the child developing a fever of 39.2°C, headache, vomiting, and delirium. On the second day after the onset of the disease, the child developed generalized tonic-clonic seizures, confusion, and hemiparesis. Polymerase chain reaction of the cerebrospinal fluid detects HSV-1 DNA. What etiotropic drug should be prescribed in this case?

- A. Acyclovir
- B. Oseltamivir
- C. Rimantadine
- D. Ceftriaxone
- E. Interferon

4. A patient complained about general weakness, fever, painful rash on his trunk skin . He has been suffering from this for 3 days. Objectively: lateral surface of trunk on the left is hyperemic and edematic, there are some groups of vesicles with serous and haemorrhagic contents. What is the most probable diagnosis?

- A. herpes zoster
- B. contact dermatitis simplex
- C. herpetiform Duhrings dermatosis
- D. contact allergic dermatitis
- E. microbial eczema

5. A 7 year old girl has mild form of varicella. Headache, weakness, vertigo, tremor of her limbs, ataxia, then mental confusion appeared on the 5th day of illness. Meningeal signs are negative. Cerebrospinal fluid examination is normal. How can you explain these signs?

- A. encephalitis
- B. myelitis
- C. meningitis
- D. meningoencephalitis
- E. neurotoxic syndrome

6. 2 days ago a patient presented with acute pain in the left half of chest, general weakness, fever and headache. Objectively: between the 4 and 5 rib on the left the skin is erythematous, there are multiple groups of vesicles 2-4 mm in diameter filled with transparent liquid. What disease are these symptoms typical for?

- A. herpes zoster
- B. herpetiform Duhrings dermatosis
- C. pemphigus
- D. streptococcal impetigo
- E. herpes simplex

7. A 27-year-old sexually active female complains of numerous vesicles on the right sex lip, itch and burning. Eruptions regularly turn up before menstruation and disappear 8-10 days later. What is the most likely diagnosis?

- A. herpes simplex virus
- B. cytomegalovirus infection
- C. genital condylomata
- D. bartholinitis
- E. primary syphilis

8. An 18 year old patient was admitted to a hospital with complaints of headache, weakness, high temperature, sore throat. Objectively: enlargement of all groups of lymph nodes was revealed. The liver is enlarged by 3 cm, spleen - by 1 cm. In blood: leukocytosis, atypical lymphocytes - 15%. What is the most probable diagnosis?

- A. infectious mononucleosis
- B. diphtheria
- C. acute lymphoid leukosis
- D. adenoviral infection
- E. angina

9. On the 5th day of a respiratory disease accompanied by fever a 24-year-old man developed progressing headaches, systemic dizziness, double vision, facial muscles paresis on the right, choking from swallowing. He was diagnosed with acute viral encephalitis. Identify the main tendency of the emergency treatment:

- A. zovirax
- B. lasix
- C. glucocorticoids
- D. ceftriaxone
- E. haemodesum

10. An 18 year old patient was admitted to a hospital with complaints of headache, weakness, high temperature, sore throat. Objectively: enlargement of all groups of lymph nodes was revealed. The liver is enlarged by 3 cm, spleen - by 1 cm. In blood: leukocytosis, atypical lymphocytes - 15%. What is the most probable diagnosis?

- A. infectious mononucleosis
- B. diphtheria
- C. acute lymphoid leukosis
- D. adenoviral infection

E. angina

Topic 9. «Childrens» droplet infections in adults (measles, rubella, mumps).

1. A newborn boy, born at 38 weeks of gestation with weight of 2200 g, presents with a ventricular septal defect, cataracts in both eyes, and sensorineural deafness. At the term of 12 weeks, the mother of the boy had a case of an influenza-like disease accompanied by a rash. In this case, the newborn will most likely be diagnosed with:

- A. Congenital rubella syndrome
- B. Toxoplasmosis
- C. Cytomegalovirus infection
- D. Congenital varicella syndrome
- E. Congenital listeriosis

2. An infant is 2.5 months old. The onset of the disease was gradual, the child had normal body temperature but presented with slight cough. Within a week the cough intensified, especially at night; on the 12th day the child developed cough occurring up to 20 times per day and followed by vomiting. There was one instance of respiratory arrest. Make the diagnosis:

- A. Pertussis
- B. Congenital stridor
- C. Adenovirus infection
- D. Respiratory syncytial infection
- E. Parainfluenza

3. A 26-year-old man complains of chills, rhinitis, dry cough, and fever up to 38°C. Examination shows him to be in a moderately severe condition; there are small pale pink non-merging spots on the skin of his back, abdomen, and extremities. Palpation reveals enlarged occipital and axillary lymph nodes. No information about vaccination history could be obtained. What is the likely etiology of this disease?

- A. Rubella virus
- B. Neisseria meningitis
- C. Streptococcus
- D. Epstein-Barr virus
- E. Mumps virus

4. Among first-graders there was a case of measles registered. A 7-year-old boy from the same group was not vaccinated against measles due to refusal of his parents. His clinical history has no cases of measles in the past and is not contraindicatory to immunobiological agents. Choose the most rational tactics of measles prevention in this schoolboy:

- A. Measles-Mumps-Rubella vaccine
- B. Isolation for 20 days
- C. Antibiotics
- D. Immunomodulators
- E. Antiviral agents

5. A child, aged 4, has been ill for 5 days, suffers from cough, skin rash, $t\ 38,2\text{ C}$, facial edema, photosensitivity, conjunctivitis. On the face, neck, upper part of the chest there is bright maculopapular rash with areas of merging. Hyperemic throat. Seropurulent nasal discharge. In lungs there are dry crackles. What is the most probable preliminary diagnosis?

- A. measles
- B. scarlet fever
- C. rubella
- D. adenovirus infection
- E. enterovirus exanthema

6. A 3 year old child has been suffering from fever, cough, coryza, conjunctivitis for 4 days. He has been taking sulfadimethoxine. Today it has fever up to 39 C and maculopapular rash on its face. Except of rash the child's skin has no changes. What is your diagnosis?

- A. measles
- B. allergic rash
- C. pseudotuberculosis
- D. scarlet fever
- E. rubella

7. A child is 4 years old, has been ill for 5 days. There are complaints of cough, skin rash, $t\ 38,2\text{ C}$, face puffiness, photophobia, conjunctivitis. Objectively: there is bright, maculo-papulous, in some areas confluent rash on the face, neck, upper chest. The pharynx is hyperemic. There are seropurulent discharges from the nose. Auscultation revealed dry rales in lungs. What is the most likely diagnosis?

- A. measles
- B. adenoviral infection
- C. rubella
- D. scarlet fever
- E. enterovirus exanthema

8. A 5-year-old child developed an acute disease starting from body temperature rise up to $38,5\text{ C}$, running nose, cough and conjunctivitis. On the 4th day the child presented with maculo-papular rash on face. Body temperature rose again up to $39,2\text{ C}$. Over the next few days the rash spread over the whole body and extremities. Mucous membrane of palate was hyperemic, there was whitish deposition on cheek mucous membrane next to molars. What is your provisional diagnosis?

- A. measles
- B. enterovirus diseases
- C. acute viral respiratory infection
- D. yersinia
- E. rubella

9. A 2 y.o. girl has been ill for 3 days. Today she has low-grade fever, severe catarrhal symptoms, non-abundant maculopapular rash on her buttocks and enlarged occipital glands. What is your diagnosis?

- A. rubella
- B. adenoviral infection
- C. scarlet fever
- D. pseudotuberculosis
- E. measles

10. A 3 year old child has been suffering from fever, cough, coryza, conjunctivitis for 4 days. He has been taking sulfadimethoxine. Today it has fever up to 39 C and maculopapular rash on its face. Except of rash the childs skin has no changes. What is your diagnosis?

- A. rubella
- B. allergic rash
- C. pseudotuberculosis
- D. scarlet fever
- E. measles

11. A 2 year old girl has been ill for 3 days. Today she has low grade fever, severe catarrhal presentations, slight maculopapular rash on her buttocks and enlarged occipital lymph nodes. What is your diagnosis?

- A. rubella
- B. scarlet fever
- C. pseudotuberculosis
- D. adenoviral infection
- E. measles

12. A 26-year-old man complains of chills, rhinitis, dry cough, and fever up to 38°C. Examination shows him to be in a moderately severe condition; there are small pale pink non-merging spots on the skin of his back, abdomen, and extremities. Palpation reveals enlarged occipital and axillar lymph nodes. No information about vaccination history could be obtained. What is the likely etiology of this disease?

- A. Rubella Virus
- B. Mumps Virus
- C. Streptococcus
- D. Epstein-Barr virus
- E. Neisseria meningitis

Topic 10. Diphtheria. Differential diagnosis with bacterial pharyngitis.

1. A woman came to a doctor with complaints of increased body temperature up to 37,8o C and moderately sore throat for the last 3 days. Objectively: mandibular lymph nodes are enlarged up to 3 cm. Palatine tonsils are hypertrophied, with gray coating that spreads to the uvula and anterior pillars of the fauces. What is the most likely diagnosis?

- A. Oropharyngeal diphtheria
- B. Infectious mononucleosis
- C. Pseudomembranous (Vincent's) tonsillitis

- D. Agranulocytosis
- E. Oropharyngeal candidiasis

2. A 7-year-old boy fell ill 2 weeks ago, when he developed a runny nose. An otolaryngologist was consulted about sanguinopurulent discharge from the child's nose and maceration of his wings of the nose and upper lip. Rhinoscopy detects whitish-gray foci on the nasal septum. The oropharyngeal mucosa is without changes. Make the diagnosis:

- A. Nasal diphtheria
- B. Adenovirus infection
- C. Maxillary sinusitis
- D. Allergic rhinitis
- E. Rhinovirus infection

3. A 58-year-old woman undergoing chemotherapy for her oncologic disorder has developed sore throat. Examination revealed necrotic areas on the mucosa of the pharynx and tonsils. Many of her teeth are afflicted with caries. In blood: neutrophilic granulocytes are practically absent against the background of leukopenia. Leukocytes are represented mainly by lymphocytes and monocytes. What disease can be suspected in the given case?

- A. Agranulocytic tonsillitis
- B. Lacunar tonsillitis
- C. Diphtheria
- D. Pseudomembranous (Vincent's) tonsillitis
- E. Syphilitic tonsillitis

4. A 16-year-old patient has made an appointment with an otolaryngologist. He complains of elevated body temperature and sore throat. Disease onset was 2 days ago, after the patient ate two portions of ice-cream. Pharyngoscopy shows hyperemic mucosa of the palatine tonsils, with purulent exudate in the lacunae. Make the provisional diagnosis:

- A. Lacunar tonsillitis
- B. Pseudomembranous (Vincent's) tonsillitis
- C. Follicular tonsillitis
- D. Diphtheria
- E. Acute pharyngitis

5. A 26-year-old man is undergoing a regular check-up. One year ago he had a case of tonsillar diphtheria complicated with myocarditis. Presently his condition is satisfactory, no signs of cardiovascular failure; ECG shows atrioventricular arrhythmia of the first degree. What vaccine was administered to this man according to his age?

- A. Adsorbed diphtheria tetanus vaccine (modied)
- B. Tetanus anatoxin
- C. Acellular DPT vaccine
- D. Oral polio vaccine (OPV)
- E. BCG vaccine

6. A 4-year-old boy had untimely vaccination. He complains of painful swallowing, headache, inertness, fever. Objectively: the child is pale, has enlarged anterior cervical lymph nodes, swollen tonsils with cyanotic hyperemia, tonsils are covered with gray-white pellicles which cannot be easily removed. When the pellicles are forcibly removed, the tonsils bleed. What is the most likely diagnosis?

- A. oropharyngeal diphtheria
- B. pseudomembranous tonsillitis
- C. follicular tonsillitis
- D. infectious mononucleosis
- E. lacunar tonsillitis

7. An 11-year-old girl has been immunized according to her age and in compliance with the calendar dates. What vaccinations should the children receive at this age?

- A. diphtheria and tetanus
- B. polio
- C. pertussis
- D. hepatitis
- E. TB

8. In an inhabited locality there is an increase of diphtheria during the last 3 years with separate outbursts in families. What measure can effectively influence the epidemic process of diphtheria and reduce the morbidity rate to single cases?

- A. immunization of the population
- B. early diagnostics
- C. detection of carriers
- D. hospitalization of patients
- E. disinfection in disease focus

9. A woman came to a doctor with complaints of increased body temperature up to 37,8°C and moderately sore throat for the last 3 days. Objectively: mandibular lymph nodes are enlarged up to 3 cm. Palatine tonsils are hypertrophied, with gray coating that spreads to the uvula and anterior pillars of the fauces. What is the most likely diagnosis?

- A. Oropharyngeal diphtheria
- B. Infectious mononucleosis
- C. Pseudomembranous (Vincent's) tonsillitis
- D. Agranulocytosis
- E. Oropharyngeal candidiasis

10. A 4-year-old boy had untimely vaccination. He complains of painful swallowing, headache, inertness, fever. Objectively: the child is pale, has enlarged anterior cervical lymph nodes, swollen tonsils with cyanotic hyperemia, tonsils are covered with gray-white pellicles which cannot be easily removed. When the pellicles are forcibly removed, the tonsils bleed. What is the most likely diagnosis?

- A. oropharyngeal diphtheria

- B. pseudomembranous tonsillitis
- C. follicular tonsillitis
- D. infectious mononucleosis
- E. lacunar tonsillitis

Topic 11. Meningococcal infection. Differential diagnosis of serous (including tuberculous) and purulent meningitis.

1. A 20-year-old patient complains of a severe headache, double vision, weakness, fever, irritability. Objectively: body temperature is 38.1°C, the patient is reluctant to contact, sensitive to stimuli. There are ptosis of the left eyelid, exotropia, anisocoria S>D, and pronounced meningeal syndrome. On lumbar puncture the cerebrospinal fluid flowed out under a pressure of 300 mm Hg, the fluid is clear, slightly opalescent. 24 hours later there appeared a fibrin film. Protein - 1.4 g/L, lymphocytes - 600 per mm³, glucose - 0.3 mmol/L. What is the provisional diagnosis?

- A. Tuberculous meningitis
- B. Lymphocytic (Armstrong's) meningitis
- C. Mumps meningitis
- D. Meningococcal meningitis
- E. Syphilitic meningitis

2. The disease of a 21 y.o. patient began with raise of temperature up to 39.0°C, headache, chill, repeated vomiting. Rigidity of occipital muscles is determined. The analysis of liquor revealed: cytosis - 1237 in 1 ml, including: 84% of neutrophils, 16% of lymphocytes. On bacterioscopy: gram-negative cocci are found in liquor. What is the most probable disease?

- A. meningococcal infection: purulent meningitis
- B. secondary purulent meningitis
- C. serous meningitis
- D. meningococcal infection: serous meningitis
- E. infectious mononucleosis

3. During examination a 4-month-old child with meningococcemia presents with acrocyanosis, cold extremities, tachypnea, and thready pulse, blood pressure of 30/0 mm Hg, anuria, and sopor. What clinical syndrome is it?

- A. Septic shock
- B. Exicosis
- C. Acute renal failure
- D. Encephalic syndrome
- E. Neurotoxicosis

4. A 20-year-old patient complains of severe headache, double vision, weakness, fever, irritability. Objectively: body temperature is 38.1°C, the patient is reluctant to contact, sensitive to stimuli. There are ptosis of the left eyelid, exotropia, anisocoria S>D, pronounced meningeal syndrome. During the lumbar puncture, the cerebrospinal fluid leaked at a pressure of 300 mm Hg, the cerebrospinal fluid was

clear, slightly opalescent. In 24 hours, cerebrospinal fluid appeared. Protein - 1.4 g/l, lymphocytes - 600/3 in mm³, sugar - 0.3 mmol/l. What is the preliminary diagnosis?

- A. Tuberculous meningitis
- B. Syphilitic meningitis
- C. Mumps meningitis
- D. Meningococcal meningitis
- E. Lymphocytic (Armstrong's) meningitis

5. A 21-year-old man was hospitalized on the 2nd day of the disease. His general condition is severe, body temperature is 39°C. On his skin there are numerous irregular-shaped hemorrhagic elements. The diagnosis of meningococcemia was made. The next day his body temperature suddenly decreased, blood pressure was 80/40 mm Hg, pulse was 120/min. Acrocyanosis was detected. What complication did the patient develop?

- A. Acute adrenal insufficiency
- B. Acute liver failure
- C. Cerebral coma
- D. Acute hemorrhage
- E. Acute heart failure

Topic 12. Emergencies in patients with infectious diseases with airborne transmission mechanism.

1. During winter epidemics of influenza caused predominantly by virus A/California/04/2009 (H1N1), on the 2nd day after the disease onset a 30-year-old hospitalized man presented with high fever, dry cough, myalgia, headache, and general weakness. What should be prescribed as etiotropic treatment in this case?

- A. Neuraminidase inhibitors (Oseltamivir)
- B. Antibiotics
- C. Immunoglobulin
- D. Interferon inducers
- E. Acyclov

2. A 65-year-old woman was diagnosed with the following: chronic rheumatic heart disease, I degree of rheumatic activity; combined mitral heart disease with prevalence of III degree stenosis; heart failure IIA with retained left ventricular ejection fraction, functional class III (NYHA). What tactics of vaccination against respiratory infections should be chosen to provide secondary prevention of exacerbations and to avoid heart failure decompensation in this patient?

- A. Scheduled yearly vaccination against influenza and pneumococci
- B. Vaccination is contraindicated due to severe heart failure
- C. Vaccination should be combined with antibiotic administration
- D. Any vaccination is contraindicated due to elderly age of the patient
- E. Any vaccination is contraindicated due to mitral valve disease

3. A patient, aged 16, complains of headache, mainly in the frontal and temporal areas, superciliary arch, appearing of vomiting at the peak of headache, pain during the eyeballs movement, joints pain. On examination: excited, to- 39 C, Ps- 110/min. Tonic and clonus cramps. Uncertain meningeal signs. What is the most likely diagnosis?

- A. influenza with cerebral edema manifestations
- B. adenovirus infection
- C. parainfluenza
- D. influenza, typical disease duration
- E. respiratory syncytial virus

4. In a 5-year-old child, the disease onset was acute, with the child developing a fever of 39.2°C, headache, vomiting, and delirium. On the second day after the onset of the disease, the child developed generalized tonic-clonic seizures, confusion, and hemiparesis. Polymerase chain reaction of the cerebrospinal fluid detects HSV-1 DNA. What etiotropic drug should be prescribed in this case?

- A. Acyclovir
- B. Oseltamivir
- C. Rimantadine
- D. Ceftriaxone
- E. Interferon

5. A patient complained about general weakness, fever, painful rash on his trunk skin . He has been suffering from this for 3 days. Objectively: lateral surface of trunk on the left is hyperemic and edematic, there are some groups of vesicles with serous and haemorrhagic contents. What is the most probable diagnosis?

- A. herpes zoster
- B. contact dermatitis simplex
- C. herpetiform Duhrings dermatosis
- D. contact allergic dermatitis
- E. microbial eczema

6. A 7 year old girl has mild form of varicella. Headache, weakness, vertigo, tremor of her limbs, ataxia, then mental confusion appeared on the 5th day of illness. Meningeal signs are negative. Cerebrospinal fluid examination is normal. How can you explain these signs?

- A. encephalitis
- B. myelitis
- C. meningitis
- D. meningoencephalitis
- E. neurotoxic syndrome

7. An 18 year old patient was admitted to a hospital with complaints of headache, weakness, high temperature, sore throat. Objectively: enlargement of all groups of lymph nodes was revealed. The liver is enlarged by 3 cm, spleen - by 1 cm. In blood: leukocytosis, atypical lymphocytes - 15%. What is the most probable diagnosis?

- A. infectious mononucleosis
- B. diphtheria
- C. acute lymphoid leukosis
- D. adenoviral infection
- E. angina

8. A 5-year-old child developed an acute disease starting from body temperature rise up to 38,5 C, running nose, cough and conjunctivitis. On the 4th day the child presented with maculo-papular rash on face. Body temperature rose again up to 39,2 C. Over the next few days the rash spread over the whole body and extremities. Mucous membrane of palate was hyperemic, there was whitish deposition on cheek mucous membrane next to molars. What is your provisional diagnosis?

- A. measles
- B. enterovirus diseases
- C. acute viral respiratory infection
- D. yersinia
- E. rubella

9. A 2 y.o. girl has been ill for 3 days. Today she has low-grade fever, severe catarrhal symptoms, non-abundant maculopapular rash on her buttocks and enlarged occipital glands. What is your diagnosis?

- A. rubella
- B. adenoviral infection
- C. scarlet fever
- D. pseudotuberculosis
- E. measles

10. A 26-year-old man complains of chills, rhinitis, dry cough, and fever up to 38°C. Examination shows him to be in a moderately severe condition; there are small pale pink non-merging spots on the skin of his back, abdomen, and extremities. Palpation reveals enlarged occipital and axillar lymph nodes. No information about vaccination history could be obtained. What is the likely etiology of this disease?

- A. Rubella Virus
- B. Mumps Virus
- C. Streptococcus
- D. Epstein-Barr virus
- E. Neisseria meningitis

11. A woman came to a doctor with complaints of increased body temperature up to 37,8o C and moderately sore throat for the last 3 days. Objectively: mandibular lymph nodes are enlarged up to 3 cm. Palatine tonsils are hypertrophied, with gray coating that spreads to the uvula and anterior pillars of the fauces. What is the most likely diagnosis?

- A. Oropharyngeal diphtheria
- B. Infectious mononucleosis

- C. Pseudomembranous (Vincent's) tonsillitis
- D. Agranulocytosis
- E. Oropharyngeal candidiasis

12. A 7-year-old boy fell ill 2 weeks ago, when he developed a runny nose. An otolaryngologist was consulted about sanguinopurulent discharge from the child's nose and maceration of his wings of the nose and upper lip. Rhinoscopy detects whitish-gray foci on the nasal septum. The oropharyngeal mucosa is without changes. Make the diagnosis:

- A. Nasal diphtheria
- B. Adenovirus infection
- C. Maxillary sinusitis
- D. Allergic rhinitis
- E. Rhinovirus infection

13. A 20-year-old patient complains of a severe headache, double vision, weakness, fever, irritability. Objectively: body temperature is 38.1°C, the patient is reluctant to contact, sensitive to stimuli. There are ptosis of the left eyelid, exotropia, anisocoria S>D, and pronounced meningeal syndrome. On lumbar puncture the cerebrospinal fluid flowed out under a pressure of 300 mm Hg, the fluid is clear, slightly opalescent. 24 hours later there appeared a fibrin film. Protein - 1.4 g/L, lymphocytes - 600 per mm³, glucose - 0.3 mmol/L. What is the provisional diagnosis?

- A. Tuberculous meningitis
- B. Lymphocytic (Armstrong's) meningitis
- C. Mumps meningitis
- D. Meningococcal meningitis
- E. Syphilitic meningitis

14. The disease of a 21 y.o. patient began with raise of temperature up to 39.0°C, headache, chill, repeated vomiting. Rigidity of occipital muscles is determined. The analysis of liquor revealed: cytosis - 1237 in 1 ml, including: 84% of neutrophils, 16% of lymphocytes. On bacterioscopy: gram-negative cocci are found in liquor. What is the most probable disease?

- A. meningococcal infection: purulent meningitis
- B. secondary purulent meningitis
- C. serous meningitis
- D. meningococcal infection: serous meningitis
- E. infectious mononucleosis

Content module 3. Viral hepatitis. HIV infection.

Topic 13 and 14. HIV infection. Bioethical issues of testing a patient for HIV infection. The concept of ART. AIDS-associated infections and infestations. Tuberculosis as an AIDS indicator disease.

1. A 28-year-old patient is a drug addict. He has been sick for a year, when noticed general weakness, increased sweating, and weight loss. He often had cases of respiratory diseases. Within the last 2 days he demonstrates intermittent fever with profuse night sweating, increased general weakness, developed diarrhea with mucus and blood admixtures. On examination: polylymphadenopathy, herpetic rashes in the oral cavity; on abdominal palpation: the liver and spleen are enlarged. What is the most likely diagnosis?

- A. HIV-infection
- B. Herpetic stomatitis
- C. Chronic lymphatic leukemia
- D. Colon cancer
- E. Chronic sepsis

2. A 26-year-old woman has been undergoing treatment for community-acquired pneumonia for 10 days. It is known that her husband had been treated for drug addiction. Sequential intravenous administration of Amoksilav (Amoxicillin+Clavunate) + Levofloxacin combination and vancomycin in the prescribed dosage was ineffective. Within the last two days the patient's dyspnea and intoxication acutely exacerbated, bilateral pulmonary infiltrates are observed. What is the most likely cause of the medication ineffectiveness?

- A. HIV infection and pneumocystic pneumonia
- B. Idiopathic organizing alveolitis
- C. Tuberculosis mycobacterium infection with development of tuberculosis
- D. Infection with polyresistant bacterial strains
- E. Cancer metastases in the pulmonary tissues

3. A 24 y.o. woman consulted a doctor about continued fever, night sweating. She lost 7 kg within the last 3 months. She had casual sexual contacts. Objectively: enlargement of all lymph nodes, hepatolienal syndrome. Blood count: leukocytes - $2,2 \cdot 10^9/L$. What disease can be suspected?

- A. HIV-infection
- B. lymphogranulomatosis
- C. chronic sepsis
- D. tuberculosis
- E. infectious mononucleosis

4. A 26 year old manual worker complained of 3 weeks history of fevers and fatigue, weight loss with no other symptoms. Physical findings: Temperature 37,6 C, Ps- 88 bpm, blood pressure 115/70 mm Hg, superficial lymph nodes (occipital, submental, cervical, axillary) are enlarged, neither tender nor painful. Rubella-like rash on the trunk and extremities. Herpes simplex lesions on the lips. Candidosis of oral cavity. What infectious disease would you suspect?

- A. HIV infection
- B. tuberculosis
- C. infectious mononucleosis
- D. rubella
- E. influenza

5. HIV displays the highest tropism towards the following blood cells:

- A. T-killers
- B. T-helpers
- C. Thrombocytes
- D. T-suppressors
- E. Erythrocytes

6. Medical examination of a 19-year-old worker revealed generalized lymphadenopathy mainly affecting the posterior cervical, axillary and ulnar lymph nodes. There are multiple injection marks on the elbow bend skin. The man denies taking drugs, the presence of injection marks ascribes to influenza treatment. Blood count: RBCs- 3,2 10¹²/l, Hb- 100 g/l, WBCs- 3,1109/l, moderate lymphopeni. What study is required in the first place?

- A. ELISA for HIV
- B. lymph node biopsy
- C. X-ray of lungs
- D. sternal puncture
- E. immunogram

7. A 4-month-old boy has been undergoing in-patient treatment for pneumocystic pneumonia for 4 weeks. The diagnosis has been made based on clinical signs, typical X-ray presentation, presence of severe hypoxemia, positive dynamics caused by intravenous introduction of Biseptol (Co-trimoxazole). Anamnesis states that enzyme-linked immuno sorbent assay (ELISA) detected antibodies to HIV in the umbilical blood. Polymerase chain reaction (PCR) was performed on the child at the ages of 1 month and 3 months, and proviral DNA was detected in the child's blood. Viral load and number of CD4+-lymphocytes was not measured. Make the diagnosis:

- A. HIV/AIDS
- B. infectious mononucleosis
- C. pneumonia
- D. tuberculosis
- E. adenovirus infection

8. A 28-year-old patient is a drug addict. He has been sick for a year, when noticed general weakness, increased sweating, and weight loss. He often had cases of respiratory diseases. Within the last 2 days he demonstrates intermittent fever with profuse night sweating, increased general weakness, developed diarrhea with mucus and blood admixtures. On examination: polylymphadenopathy, herpetic rashes in the oral cavity; on abdominal palpation: the liver and spleen are enlarged. What is the most likely diagnosis?

- A. HIV-infection
- B. herpetic stomatitis
- C. chronic lymphatic leukemia
- D. colon cancer
- E. chronic sepsis

9. The 28 y.o. woman applied to doctor because of limited loss of the hair. In the anamnesis - she had frequent headache indisposition, arthromyalgia, fever, irregular casual sexual life, drug user. RW is negative. What examination must be done first?

- A. examination for HIV
- B. examination for gonorrhea
- C. examination for neuropathology
- D. examination for trichomoniasis
- E. examination for fungi

10. A 24 y.o. woman presents with prolonged fever, nocturnal sweating. She's lost weight for 7 kg during the last 3 months. She had irregular intercours. On examination: enlargement of all lymphaden groups, hepatolienal syndrom. In blood: WBC- $2,2 \cdot 10^9/L$. What is the most likely diagnosis?

- A. HIV-infection Chroniosepsis
- B. lymphogranulomatosis
- C. infectious mononucleosis
- D. chroniosepsis HIV-infection
- E. tuberculosis

Topic 15,16 and 17. Viral hepatitis with a fecal-oral transmission mechanism. Acute viral hepatitis with parenteral transmission mechanism. Chronic viral hepatitis with a parenteral transmission mechanism. Complications of chronic hepatitis.

1. An 8 y.o. boy was ill with B hepatitis one year ago. In the last 2 months he has complaints of undue fatiguability, sleep disorder, appetite loss, nausea, especially in the mornings. Skin isn't icterious, liver and spleen are 1 cm below the costal margins, painless. Alanine aminotransferase activity is $2,2 \text{ mcmol/L}$. How can this condition be estimated?

- A. development of chronic hepatitis
- B. development of chronic hepatitis
- C. recurrence of viral hepatitis type B
- D. biliary dyskinesia
- E. residual effects of old viral hepatitis type B

2. A 20 y.o. patient was admitted to the hospital with complaints of having skin and sclera icteritiousness, dark urine, single vomiting, appetite loss, body temperature rise up to 38°C for 2 days. Three weeks ago he went in for fishing and shared his dishes with friends. Objectively: the patient is flabby, $t 36,8^\circ\text{C}$, skin and scleras are icteritious, liver sticks from under the costal margin by 3 cm, it is sensitive; spleen isn't palpable. Urine is dark, stool is partly acholic. What is the most probable diagnosis?

- A. virus A hepatitis
- B. hemolytic anemia
- C. intestinal yersiniosis
- D. infectious mononucleosis

E. leptospirosis

3. A 10 year old boy suffers from chronic viral hepatitis type B with maximal activity. What laboratory test can give the most precise characteristic of cytolysis degree?

- A. transaminase test
- B. weltmans coagulation test
- C. takata-Ara test
- D. test for whole protein
- E. prothrombin test

4. A 32 year old patient suffering from chronic viral hepatitis complains about dull pain in the right subcostal area, nausea, dry mouth. Objectively: liver dimensions are 13-21-11 cm (according to Kurlov), spleen is by 2 cm enlarged, aspartate aminotransferase is 3,2 micromole/lh, alanine aminotransferase - 4,8 millimole/lh. Serological study revealed HBeAg, high concentration of DNA HBV. What drug should be chosen for treatment of this patient?

- A. alpha-interferon
- B. arabinoside monophosphate
- C. acyclovir
- D. essentielle-forte
- E. remantadinum

5. A 65-year-old patient has been suffering from liver cirrhosis associated with hepatitis C virus for 7 years. During the last 3 weeks the patient developed severe edema of the lower extremities, the abdomen is significantly distended with fluid. Ultrasound: signs of liver cirrhosis, portal hypertension, lymph nodes are in the area of hepatic portal. Concentration of α -fetoprotein in blood serum is 285 ng/ml. What complication could have developed in this case?

- A. Hepatocellular carcinoma of the liver
- B. Hepatocellular insufficiency
- C. Hypersplenism
- D. Cholestasis
- E. Congestive heart failure

6. A woman undergoing in-patient treatment for viral hepatitis B developed headache, nausea, recurrent vomiting, memory lapses, flapping tremor of her hands, rapid pulse. Sweet smell from the mouth is detected. Body temperature is 37,6°C, heart rate is 89/min. What complication developed in the patient?

- A. Acute liver failure
- B. Ischemic stroke
- C. Gastrointestinal hemorrhage
- D. Hypoglycemic shock
- E. Meningoencephalitis

7. A patient has been hospitalised. The onset of the disease was gradual: nausea, vomiting, dark urine, acholic stool, yellowness of the skin and scleras. The liver is enlarged by 3 cm. Jaundice developed on the 14th day of the disease. The liver diminished in size. What complication of viral hepatitis caused deterioration of the patient's condition?

- A. Hepatic encephalopathy
- B. Meningitis
- C. Relapse of viral hepatitis
- D. Cholangitis
- E. Infectious-toxic shock

8. A 22 year old woman complained of right subcostal aching pain, nausea, and decreased appetite. She fell ill 2 years after appendectomy when jaundice appeared. She was treated in an infectious hospital. 1 year later above mentioned symptoms developed. On exam: the subicteric sclerae, enlarged firm liver. Your preliminary diagnosis:

- A. Chronic viral hepatitis
- B. Calculous cholecystitis
- C. Gilbert's disease
- D. Acute viral hepatitis
- E. Chronic cholangitis

9. A 32 year old patient suffering from chronic viral hepatitis complains about dull pain in the right subcostal area, nausea, dry mouth. Objectively: liver dimensions are 13-21-11 cm (according to Kurlov), spleen is by 2 cm enlarged, aspartate aminotransferase is 3,2 micromole/l·h, alanine aminotransferase - 4,8 millimole/l·h. Serological study revealed H BeAg, high concentration of DN A H BV. What drug should be chosen for treatment of this patient?

- A. α -interferon
- B. Acyclovir
- C. Remantadine
- D. Arabinoside monophosphate
- E. Essentiale-forte

10. An 18-year-old young man during hospitalization complains of general weakness, body temperature of 37.5°C, loss of appetite, nausea, heaviness in the right subcostal region, and discolored stool and urine. The disease onset was 5 days ago. Objectively, his skin and sclerae are slightly icteric. The liver protrudes by 3 cm and is tender to palpation. Patient's urine is dark brown, while his stool is lightcolored. He usually drinks water from a tap. What is the most likely diagnosis in this case?

- A. Viral hepatitis A
- B. Viral hepatitis B
- C. Typhoid fever
- D. Malaria
- E. Leptospirosis

Content module 4. Infectious Diseases with a Vector-borne Transmission Mechanism. Fever Syndrome. Sepsis.

Topic 18. General characteristics of infectious diseases with a vector-borne transmission mechanism. The concept of Travel medicine. Tropical medicine. Malaria. Pappatachi fever.

1. For a week a 42-year-old patient has been suffering from fever attacks followed by high temperature, which occur every 48 hours. Body temperature raises up to 40°C and decreases in 3-4 hours with excessive sweating. The patient presents with loss of appetite and general fatigue. The skin is pale and sallow. The liver and spleen are enlarged and dense on palpation. What method of diagnosis verification would be most efficient?

- A. Microscopy of blood smear and thick blood film
- B. Microscopy of hanging blood drop
- C. Bacteriological analysis
- D. Complete blood count
- E. Immune-enzyme assay

2. A 23 year old female patient complains about periodical chill and body temperature rise up to 40 C, sense of heat taking turns with profuse sweating. The patient has had already 3 attacks that came once in two days and lasted 12 hours. She has lived in Africa for the last 2 months. Liver and spleen are enlarged. In blood: erythrocytes - $2,5 \cdot 10^{12}/l$. What is the most probable diagnosis?

- A. malaria
- B. sepsis
- C. spotted fever
- D. leptospirosis
- E. haemolytic anaemia

3. A 34-year-old male visited Tajikistan. After return, he complains of fever up to 40 C which occurs every second day and is accompanied by chills, sweating. Hepatosplenomegaly is present. Blood test results: RBC- $3 \cdot 10^{12}/l$, Hb-80 g/l, WBC- $4 \cdot 10^9/l$, eosinophils - 1%, stab neutrophils - 5%, segmented neutrophils - 60%, lymphocytes 17 24%, monocytes - 10%, ESR - 25 mm/h. What is the provisional diagnosis?

- A. malaria
- B. typhoid fever
- C. leptospirosis
- D. infectious mononucleosis
- E. sepsis

4. A 27-year old patient with malaria caused by *P. falciparum* was treated with Chloroquine (600 mg base followed by 300 mg base in 6 hours, then 300 mg base a day for 2 days) without clinical and parasitologic responses to the treatment. What is the most likely reason for the failure to respond to the therapy?

- A. Chloroquine resistant strain of *P. falciparum*
- B. Glucose-6-phosphate dehydrogenase deficiency in patient
- C. Late recognition of infection due to *P. falciparum*
- D. Inappropriate route of administration
- E. Hypersensitivity of the patient to Chloroquine

5. A 38-year-old woman developed a medical condition 7 days after her return from Bangladesh. Periodical elevation of temperature was accompanied by chills and excessive sweating. She was diagnosed with tropical malaria. Next day her condition further deteriorated: body temperature - 38°C. inertness, periodical loss of consciousness, generalized seizures, tachycardia, hypotension, and icteric skin. What complication can be suspected in this case?

- A. Cerebral coma
- B. Serous meningitis
- C. Purulent meningitis
- D. Acute hepatic failure
- E. Acute heart failure

Topic 19. Long-term fever syndrome of unknown origin. Diagnostic algorithm. Brucellosis.

1. A 23-year-old woman, who works as a milk and dairy inspector, after the miscarriage suffers from high fever up to 38,6 C, recurring chills, excessive sweating. Objectively: polyadenitis, pain in the lumbosacral spine, swollen left knee joint, enlarged liver and spleen. What diagnosis is most likely?

brucellosis
sepsis
toxoplasmosis
polyarticular rheumatoid arthritis
yersiniosis

Topic 20. Sepsis.

1. A patient has the second and third degree burns of the 15% of the body surface. On the 20th day after the trauma the patient presents with sharp increase of body temperature, general weakness, rapid vesicular respiration; facial features are sharpened, BP is 90/50 mm Hg, heart rate is 112/min. What complication is it?

- A. Sepsis
- B. Anaerobic infection
- C. Acute intoxication
- D. Pneumonia
- E. Purulent bronchitis

2. A 38-year-old man underwent surgical treatment of a wound with a suppuration focus. On the 8th day after the procedure the wound cleared of purulo-necrotic discharge and granulations appeared. However, against the background of antibacterial therapy, the patient's body temperature persists as high as 38.5-39.5°C; chills, excessive sweating, and euphoria are observed in the patient; heart rate is 120/min. What complication of the local suppurative inflammatory process can be suspected?

- A. Sepsis
- B. Pneumonia
- C. Trombophlebitis
- D. Purulent-resorptive fever
- E. Meningitis

Topic 21. Tick-borne encephalitis, Lyme disease, Crimean-Congo hemorrhagic fever. Leishmaniasis.

1. A group of 5 had been resting in a forest, they were drinking alcohol and eating canned mushrooms and cured. The next day two of them were hospitalized with disturbed vision, swallowing and respiration; the third one presented with acute general weakness and dry mouth. The remaining two were healthy. A tick was detected on the skin of one of the healthy group members. What is the most likely diagnosis? C.

- A. Lyme borreliosis
- B. Alcohol poisoning
- C. Botulism
- D. Mushroom poisoning
- E. Tick-borne encephalitis

2. A 45-year-old patient complains of constant headache, heart and knee pain. Three years ago, he had a tick bite with annular erythema on the skin. Objectively: acrodermatitis, bilateral pyramidal insufficiency, coordination disorders. What is the most likely diagnosis?

- A: Neuroborreliosis
- B: Viral encephalitis
- C: Ischemic encephalopathy
- Д: Multiple sclerosis
- E: Neurosyphilis

Content module 5. Infectious diseases with wound and multiple transmission mechanisms

Topic 22. Infectious diseases with predominant kidney damage: leptospirosis, hemorrhagic fever with renal syndrome. Toxoplasmosis.

1. A 25-year-old patient was delivered to an infectious diseases unit on the 3rd day of illness with complaints of headache, pain in lumbar spine and gastrocnemius muscles, high fever, chill. Objectively: condition of moderate severity. Scleras are icteric. Pharynx is hyperemic. Tongue is dry with dry brown coating. Abdomen is distended. Liver is enlarged by 2 cm. Spleen is not enlarged. Palpation of muscles, especially gastrocnemius muscles, is painful. Urine is dark in colour. Stool is normal in colour. The most likely diagnosis is:

- A. Leptospirosis
- B. Viral hepatitis type A
- C. Infectious mononucleosis

- D. Yersiniosis
- E. Malaria

2. A 32-year-old man came to a doctor on day 5 after the onset of the disease. He complains of a fever of 39.8°C, headache, pain in the calf muscles, pain in the back, and lumbar pain. Objectively, the face is hyperemic, the sclera is icteric, hemorrhages are observed on the skin of the torso and limbs. The patient presents with hepatosplenomegaly. The sign of costovertebral angle tenderness is positive. Diuresis - 450 mL. What is the most likely diagnosis in this case?

- A. Leptospirosis
- B. Measles
- C. Typhus
- D. Infectious mononucleosis
- E. Brucellosis

3. A 40-year-old woman, gravida 6, para 3, at the 40 weeks of her pathological pregnancy (threatened miscarriage, type I gestosis of the second half of her pregnancy), gave birth to a boy with asphyxia. The baby's condition is severe, the weight is 2 kg, there are signs of immaturity and hydrocephalus. The baby's skin is pale, icteric, and has acrocyanosis. The heart sounds are muffled, there is a harsh systolic murmur at all points of auscultation. The abdomen is enlarged, the liver is +3 cm. The urine is saturated, the stool is light-colored. An ophthalmologist has detected chorioretinitis in the baby. Make the diagnosis:

- A. Congenital toxoplasmosis
- B. Sepsis
- C. Congenital heart defect
- D. Congenital hepatitis
- E. Hemolytic disease of the newborn

4. A 25-year-old patient was delivered to an infectious diseases unit on the 3rd day of illness with complaints of headache, pain in lumbar spine and gastrocnemius muscles, high fever, chill. Objectively: condition of moderate severity. Scleras are icteric. Pharynx is hyperemic. Tongue is dry with dry brown coating. Abdomen is distended. Liver is enlarged by 2 cm. Spleen is not enlarged. Palpation of muscles, especially gastrocnemius muscles, is painful. Urine is dark in colour. Stool is normal in colour. The most likely diagnosis is:

- A. Leptospirosis
- B. Viral hepatitis type A
- C. Infectious mononucleosis
- D. Yersiniosis
- E. Malaria

5. A patient was admitted to the hospital on the 7th day of the disease with complaints of high temperature, headache, pain in the muscles, especially in calf muscles. Dermal integuments and scleras are icteric. There is hemorrhagic rash on the skin. Urine is bloody. The patient was fishing two weeks ago. What is the most likely diagnosis?

- A. leptospirosis
- B. salmonellosis
- C. yersiniosis
- D. brucellosis
- E. trichinellosis

6. A 33 year old patient was delivered to the infectious diseases department on the 7-th day of disease. He complained about great weakness, high temperature, pain in the lumbar area and leg muscles, icteritiousness, dark colour of urine, headache. The acute disease started with chill, body temperature rise up to 40°C, headache, pain in the lumbar area and sural muscles. Icterus turned up on the 4th day, nasal and scleral haemorrhages came on the 5th day. Fever has lasted for 6 days. Diuresis - 200 ml. What is the most probable diagnosis?

- A. leptospirosis
- B. sepsis
- C. typhoid fever
- D. yersiniosis
- E. virus A hepatitis

7. A 25-year-old patient was delivered to an infectious diseases unit on the 3rd day of illness with complaints of headache, pain in lumbar spine and gastrocnemius muscles, high fever, chill. Objectively: condition of moderate severity. Scleras are icteric. Pharynx is hyperemic. Tongue is dry with dry brown coating. Abdomen is distended. Liver is enlarged by 2 cm. Spleen is not enlarged. Palpation of muscles, especially gastrocnemius muscles, is painful. Urine is dark in colour. Stool is normal in colour. The most likely diagnosis is:

- A. leptospirosis
- B. malaria
- C. yersiniosis
- D. infectious mononucleosis
- E. viral hepatitis type A

8. A 45-year-old man, a farmer, presents with acute onset of a disease. He complains of headache, high temperature, pain in the gastrocnemius muscles, icteric face, and dark urine. Objectively: body temperature – 38 C, blood pressure - 100/70 mm Hg, conjunctival hemorrhages, hepatosplenomegaly and oliguria. What is the most likely provisional diagnosis?

- A. Leptospirosis
- B. Viral hepatitis
- C. Brucellosis
- D. Pseudotuberculosis
- E. Trichinosis

**Topic 23. Infectious diseases with a predominant nervous system damage:
rabies, tetanus.**

1. On the 15th day after a small trauma of the right foot, the patient developed indisposition, fatigability, irritability, headache, elevated body temperature, and sensation of constriction, tension, and twitching in the muscles of the right shin. What disease can be suspected?

- A. Tetanus
- B. Acute thrombophlebitis
- C. Erysipelas
- D. Anaerobic gas gangrene
- E. Thrombophlebitis of the popliteal artery

2. A 46-year-old man came to the surgeon's office. He complains of twitching sensation in the wound on his left foot, insomnia, and anxiety. According to the patient, he received this wound 5 days ago, when he accidentally stepped on a glass shard, while on the beach. He requested no medical assistance. Objectively the patient's general condition is satisfactory, pulse is 75/min., blood pressure is 130/80 mm Hg, temperature is 36.9°C. On the plantar surface of his foot there is a wound 1.5 cm long and up to 3 cm deep. The wound edges are moderately hyperemic, no discharge from the wound is observed. What disease can be suspected in this patient?

- A. Tetanus
- B. Anthrax
- C. Diphtheria
- D. Fasciitis
- E. Phlegmon

3. On the 15th day after a small trauma of the right foot, the patient developed indisposition, fatigability, irritability, headache, elevated body temperature, and sensation of constriction, tension, and twitching in the muscles of the right shin. What disease can be suspected?

- A. Tetanus
- B. Acute thrombophlebitis
- C. Erysipelas
- D. Anaerobic gas gangrene
- E. Thrombophlebitis of the popliteal artery

4. A farmer hurt his right foot during working in a field and came to the emergency station. He doesn't remember when he got last vaccination and he has never served in the army. Examination of his right foot revealed a contaminated wound up to 5-6 cm long with uneven edges. The further treatment tactics will be:

- A. to make an injection of tetanus anatoxin and antitetanus serum
- B. to administer an antibiotic
- C. surgical debridement only
- D. to make an injection of tetanus anatoxin
- E. to make an injection of antitetanus serum

5. A 45-year-old patient complains of fever up to 40°C, general weakness, headache and spasmodic contraction of muscles in the region of a shinwound. The patient got injured five days ago when tilling soil and didn't seek medical attention. What kind of wound infection can be suspected?

- A. tetanus
- B. anthrax
- C. gram-negative
- D. gram-positive
- E. erysipelas

Topic 24. Infectious diseases regulated by the International Health Regulations (plague, yellow fever, Marburg fever, Ebola fever, Lassa fever).

1. A 35-year-old patient has been suffering from an illness for 3 days. 5 days ago he returned from a trip to Africa. The onset of disease was accompanied by fever up to 40°C, chills, acute headache, myalgia. In the axillary region the lymph node enlarged up to 3x6 cm can be palpated. The lymph node is dense, intensely painful, slightly mobile, without clear margins; the skin over the node is hyperemic and tight. Tachycardia is present. Make the preliminary diagnosis:

- A. Plague
- B. Tularemia
- C. Anthrax
- D. Lymphadenitis
- E. Sepsis

2. A man, who one day ago returned from a trip to Africa, presents with a sharply painful cluster of lymph nodes in his armpit. The skin over the lymph node cluster is hyperemic. Bubonic plague is suspected. What must the contact persons use for urgent prevention of this disease?

- A. Doxycycline
- B. Praziquantel
- C. Fluconazole
- D. Homologous immunoglobulin
- E. Heterologous serum

Topic 25. Anthrax. Tularemia. The concept of biohazards and biosafety levels. Infectious diseases with a predominant contact transmission mechanism: erysipelas.

1. A 42-year-old man complains of a spot that appeared on his left arm and transformed into a pustule with a black bottom over the course of 24 hours. The patient is a farmer. Objectively, his arm is noticeably edematous, the pustule is painless when touched and is surrounded by a rim of daughter vesicles on its periphery. Body temperature - 39.7°C, blood pressure - 90/60 mm Hg, pulse - 110/min. What is the most likely diagnosis in this case?

- A. Anthrax
- B. Brucellosis

- C. Tularemia
- D. Plague
- E. Nonspecific lymphadenitis

2. A 62-year-old woman has an acute onset of the disease: high temperature of 39.8°C, chills, intense headache, and aching body. She complains of nausea and one episode of vomiting. 18 hours later, her right inguinal lymph nodes became enlarged and sharply painful. After another 6 hours, she developed edema of the right shin and skin hyperemia with irregular-shaped clear margins. What is the most likely diagnosis in this case?

- A. Erysipelas, erythematous form
- B. Anthrax, edematous form
- C. Bubonic plague
- D. Bubonic tularemia
- E. Phlegmon of the right shin

3. A 49-year-old countryman got an itching papule on the dorsum of his right hand. In the centre there is a vesicle with serosanguinous exudate. Within the next 2 days the patient developed a painless edema of hand and forearm. On the 4th day the temperature rose to 38.5°C, in the right axillary region a large painful lymph node was found. One day before the onset of the disease the patient had examined a dead calf. What is the most likely diagnosis?

- A. Cutaneous anthrax
- B. Bubonic plague
- C. Carbuncle
- D. Lymphocutaneous tularemia
- E. Erysipelas

4. A 43-year-old female patient complains of rash on the skin of her right leg, pain, weakness, body temperature rise up to 38.0°C. The disease is acute. Objectively: there is an edema on the skin of her right leg in the foot area, a well-defined bright red spot in the irregular shape of flame tips, which is hot to touch. There are isolated vesicles in the focus. What is your provisional diagnosis?

- A. Erysipelas
- B. Microbial eczema
- C. Contact dermatitis
- D. Toxicoderma
- E. Haemorrhagic vasculitis

5. A 62-year-old woman has an acute onset of the disease: high temperature of 39.8°C, chills, intense headache, and aching body. She complains of nausea and one episode of vomiting. 18 hours later, her right inguinal lymph nodes became enlarged and sharply painful. After another 6 hours, she developed edema of the right shin and skin hyperemia with irregular-shaped clear margins. What is the most likely diagnosis in this case?

- A. Erysipelas, erythematous form
- B. Bubonic plague

- C. Anthrax, edematous form
- D. Bubonic tularemia
- E. Phlegmon of the right shin

Content module 6. Clinical epidemiology and vaccine prevention

Topic 26 and 27. Immunoprophylaxis of infectious diseases. Vaccination schedule. Legal aspects of vaccine prevention. Organization and administration of vaccinations. Post-exposure immunoprophylaxis.

1. A 16-year-old adolescent living in a rural area has been bitten in the shin by a stray dog. The wound is superficial. Regular vaccination against tetanus was received 3 months ago. What treatment tactics would be the most advisable in this case?

- A. Antirabies vaccination
- B. Antitetanus immunoglobulin
- C. Tetanus toxoid adsorbed
- D. Antirabies immunoglobulin
- E. Antitetanus serum

2. A 15-year-old girl suffers from systemic lupus erythematosus and has been receiving prednisolone therapy in the daily dosage of 2 mg/kg for the last 6 weeks. The plans are made to gradually lower the dosage of the medicine. No clinical signs of her disease are observed. Previously she has received no immunization against measles. Due to measles outbreak it is necessary to develop the immunity against this infection in the patient. When can she be vaccinated?

- A. At the present time
- B. Immediately after the prednisolone therapy is complete
- C. Never due to medical contraindications
- D. After 2 weeks of prednisolone therapy in the dosage lower than 2 mg/kg/24 hours
- E. 1 month after the prednisolone therapy is complete

3. A 45-year-old veterinary worker has made an appointment with the doctor for regular examination. In his duties he frequently deals with animals, however he denies working with rabies-affected animals. Previously he has received no antirabic vaccination. What should the doctor recommend in this case?

- A. Preventive immunization with antirabic vaccine
- B. Preventive immunization with rabies immunoglobulin
- C. Preventive immunization with anti-rabies serum
- D. Administration of antirabic vaccine and rabies immunoglobulin
- E. Vaccination in case of contact with sick animal

4. A healthy child 1 year and 5 months of age is being vaccinated against hepatitis B. The child did not receive the dose of the vaccine previously, while in the maternity hospital. The doctor makes an individual vaccination schedule for this child and plans the administration of the next dose of the vaccine. What is the minimum interval between doses of vaccine in this case?

- A. 1 month

- B. 6 months
- C. 3 months
- D. 12 months
- E. 2 months

5. A 45-year-old woman has been suffering from rheumatoid arthritis for 10 years and takes methotrexate twice a week. What statement regarding vaccination against pneumococci (23-valent vaccine) would conform to the recommendations for the management of rheumatoid arthritis issued by the European League Against Rheumatism in 2010?

- A. Vaccination is recommended
- B. Vaccination is contraindicated to the patients who take methotrexate
- C. Vaccination is not recommended
- D. Vaccination is contraindicated in cases when inflammatory process is active
- E. Vaccination necessitates increase in the dosage of the long-term medicines

6. A 65-year-old woman was diagnosed with the following: chronic rheumatic heart disease, I degree of rheumatic activity; combined mitral heart disease with prevalence of III degree stenosis; heart failure IIA with retained left ventricular ejection fraction, functional class III (NYHA). What tactics of vaccination against respiratory infections should be chosen to provide secondary prevention of exacerbations and to avoid heart failure decompensation in this patient?

- A. Scheduled yearly vaccination against influenza and pneumococci
- B. Vaccination is contraindicated due to severe heart failure
- C. Vaccination should be combined with antibiotic administration
- D. Any vaccination is contraindicated due to elderly age of the patient
- E. Any vaccination is contraindicated due to mitral valve disease

7. A 69-year-old woman was diagnosed with the following: ischemic heart disease; stable exertional angina pectoris, FC III; heart failure IIA with retained left ventricular ejection fraction, functional class III (NYHA). What vaccine should be chosen for influenza prevention and to avoid destabilization of the patient's condition?

- A. Type of influenza vaccine is not important
- B. Recombinant influenza vaccine (RIV)
- C. Vaccination is contraindicated due to elderly age of the patient
- D. Vaccination is contraindicated due to severe heart failure
- E. Inactivated influenza vaccine (IIV)

8. A 60-year-old man presents with subcompensated viral liver cirrhosis (HCV), Child-Pugh class B. What tactics should be chosen regarding the vaccination against influenza in this case?

- A. Scheduled yearly vaccination
- B. Contraindicated due to disease progression stage, as shown by Child-Pugh class
- C. Contraindicated due to elderly age of the patient
- D. In case of influenza outbreak
- E. Combined with antiviral drugs

9. A 20-year-old student was brought to the emergency room. He had a closed fracture of the left forearm and a contused laceration of the left shin. After the primary surgical treatment of the wound, he presented documents confirming that he had received all the necessary preventive vaccinations according to the schedule. What should the doctor do to prevent tetanus in this patient?

- A. Dynamic case monitoring
- B. Administration of anti-tetanus serum
- C. Administration of tetanus immunoglobulin
- D. Antibiotic therapy
- E. Administration of tetanus toxoid

10. A 6-month-old infant is not vaccinated. The physician recommends a DPT (diphtheria, pertussis, tetanus) vaccination but the mother is absolutely against this procedure. Choose the most substantial argument in favor of vaccination:

- A. Risk of lethal consequences
- B. Personal professional experience
- C. —
- D. High quality of vaccines
- E. Epidemic risk for the others

11. In autumn a 45-year-old man was recommended an elective surgery for coronary artery bypass grafting due to multivessel coronary artery disease. The patient has never received anti-influenza vaccination. Why would the family doctor offer a scheduled yearly vaccination against influenza to this patient?

- A. Decrease the risk of mortality due to pneumonia and heart failure
- B. Immunoprophylaxis of postoperative pulmonary complications
- C. Prevention of seasonal influenza
- D. Primary prevention of influenza during postoperative care
- E. Secondary prevention of exacerbations of chronic ischemic heart disease

12. A 28-year-old woman has made an appointment with the family doctor to receive vaccination against influenza. However, having collected the patient's medical history, the doctor claimed this procedure to be absolutely contraindicated for this woman. What anamnestic data is the absolute contraindication to vaccination?

- A. Egg white intolerance
- B. Body temperature - 37.2°C
- C. Psoriasis in the remission phase
- D. Pregnancy at 30 weeks
- E. Blood hemoglobin - 109 g/L

13. During administration of planned DPT vaccination the child suddenly developed acute anxiety, signs of pain response, dyspnea, grunting respirations, cutis marmorata, cold sweat. Objectively the child's

consciousness is disturbed, heart rate is 150/min., blood pressure is 60/40 mm Hg, heart sounds are muffled. The child was diagnosed with anaphylactic shock. What drug should be administered first?

- A. Epinephrine
- B. Lasix (Furosemide)
- C. Euphylline (Aminophylline)
- D. Analgin (Metamizole)
- E. Suprastin (Chloropyramine)

14. Among first-graders there was a case of measles registered. A 7-year-old boy from the same group was not vaccinated against measles due to refusal of his parents. His clinical history has no cases of measles in the past and is not contraindicated to immunobiological agents. Choose the most rational tactics of measles prevention in this schoolboy:

- A. Measles-Mumps-Rubella vaccine
- B. Isolation for 20 days
- C. Antibiotics
- D. Immunomodulators
- E. Antiviral agents

15. A 40-year-old man developed fever up to 37.5°C and macular rash 10 days after the first dose MMR (Measles-Mumps-Rubella) vaccine was administered. The vaccination was considered necessary as there was a measles outbreak in the city and the patient had not received MMR vaccination in his childhood. Is revaccination with MMR vaccine possible?

- A. Possible
- B. After a course of glucocorticoids treatment
- C. Under supervision in the infectious diseases inpatient ward
- D. Simultaneously with antihistamines
- E. Forbidden

16. A 26-year-old man is undergoing a regular check-up. One year ago he had a case of tonsillar diphtheria complicated with myocarditis. Presently his condition is satisfactory, no signs of cardiovascular failure; ECG shows atrioventricular arrhythmia of the first degree. What vaccine was administered to this man according to his age?

- A. Adsorbed diphtheria tetanus vaccine (modified)
- B. Tetanus anatoxin
- C. Acellular DPT vaccine
- D. Oral polio vaccine (OPV)
- E. BCG vaccine

17. During agricultural work in the field, a tractor driver received an open trauma of the hand. The tractor driver has never completed the full course of planned anti-tetanus immunization. What should he be given for urgent specific prevention of tetanus in this case?

- A. 1 mL of tetanus anatoxin, 3000 IU of anti-tetanus serum

- B. 1 mL of tetanus anatoxin, 50000 IU of anti-tetanus serum
- C. No prevention is necessary
- D. 0.5 mL of tetanus anatoxin, 3000 IU of anti-tetanus serum
- E. 3000 IU of anti-tetanus serum

18. A healthy newborn baby whose mother is HBsAg-positive (+) needs to receive hepatitis B vaccination in the maternity hospital. What would be the optimal vaccination tactics in this case?

- A. Administer the first dose of the vaccine within 24 hours after birth, administer the second and the third dose at the age of 2 and 6 months, respectively
- B. Administer only hepatitis B immunoglobulin
- C. Hepatitis B vaccine must be administered after 1 year
- D. The child can be administered hepatitis B immunoglobulin after determining the HBsAg status
- E. The child is already infected and therefore does not need to be vaccinated