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## EVALUATION MATERIALS FOR INTERIM CERTIFICATION FOR THE DISCIPLINE

### Infectious Diseases

Curriculum	31.05.01 General Medicine
Qualification	General Medicine
Form of education	Full-time
Designer Department	Multidisciplinary Clinical Training
Graduate Department	Internal diseases

### STANDARD TASKS FOR CONTROL WORK CHECK TEST – WRITING A CASE HISTORY

#### Final test

The test is carried out with the aim of monitoring students' assimilation of knowledge from the lecture course, assessing the knowledge and skills acquired during practical classes, as well as testing the ability to solve various types of problems that develop professional abilities in accordance with the requirements of the specialist's qualification characteristics. Test work is carried out according to the schedule during class hours in the amount provided for by the work program for the discipline and the teaching load of the teacher. The time to prepare for the test is included in the hours of students' independent work and should not exceed 4 hours. The test work is assessed using a differentiated assessment. In case of an unsatisfactory grade received by the student, a new deadline for writing the test is assigned outside of class time.

(Surgut State University Quality management system QMS SurGU STO-2.12.5-15 Organization of ongoing monitoring of academic performance and intermediate certification of students Revision No. 2 page 7 of 21)

#### Writing a clinical history

The student independently selects a nosological form, develops and defends a medical history according to the proposed scheme (Appendix No. 2 Medical history diagram)

The main stages of writing a clinical history:

Title page (separate page)

1. Passport part.
2. Complaints: the main ones and those found during the survey by organ system.
3. History of the main and concomitant diseases.
4. Life history. Epidemiological history.
5. Data from an objective examination of the patient.
6. Rationale for the preliminary diagnosis and its formulation.
7. Survey plan.
8. Laboratory and instrumental research data, consultants' opinions.
9. Final clinical diagnosis (substantiation and formulation).

10. Differential diagnosis.
11. Treatment of the patient and its rationale.
12. Forecast.
13. Prevention (primary and secondary).
14. Epicrisis.
15. Supervision diary.
16. List of used literature.

### **SAMPLE QUESTIONS FOR THE EXAM (10th semester)**

**The test contains three theoretical questions and a situational task.**

1. The concept of “infection”, “infectious process”, “infectious disease”. Periods of infectious disease and their significance for diagnosis.
  2. The concept of an infectious disease and its signs.
  3. General patterns of development of the infectious process, its forms.
  4. Contents and objectives of the science of infectious diseases. Its relationship with other medical disciplines.
  5. Classification of infectious diseases. Principles of classification individual nosological forms.
  6. General principles of early detection of infectious patients in practice local doctor.
  7. Principles of early diagnosis of infectious diseases.
  8. Basic principles and methods of treating infectious patients.
  9. Principles of antibiotic therapy for infectious patients.
  10. Natural focal diseases of Western Siberia and their prevention.
- Intestinal infections.
11. Typhoid fever: etiology, epidemiology, pathogenesis, clinic.
  12. Treatment of patients with typhoid fever. Detection and diagnosis of bacterial carriage during the period of convalescence.
  13. Typhoid fever. Pathogenesis, pathomorphological changes in the intestine. Diagnosis of the disease.
  14. Dysentery: colitis form. Clinic, diagnosis and treatment.
  15. Dysentery. Clinical classification of dysentery. Gastroenterocolitic form of dysentery. Diagnosis and treatment.
  16. Differential diagnosis of bacterial dysentery, salmonellosis, foodborne toxic infection.
  17. Salmonella. Pathogenesis, clinical picture, diagnosis, treatment.
  18. Salmonellosis. Gastrointestinal form. Clinic and treatment.
  19. Characteristics of generalized forms of salmonellosis. Treatment of patients.
  20. Salmonellosis. Etiology, epidemiology, pathogenesis. Clinical classification. Diagnosis and prevention of salmonellosis.
  21. Pseudotuberculosis. Etiology, epidemiology, clinic, diagnosis, and treatment.
  22. Yersiniosis. Etiology, epidemiology, clinical picture, diagnosis and treatment.

23. Cholera. Features of the epidemiology and course of cholera EL-TOR.
  24. Clinical forms of cholera, their characteristics. Organization of reception and treatment of cholera patients.
  25. Foodborne toxic infections, etiology, clinical picture, diagnosis and treatment.
  26. Emergency conditions in case of food toxic infections. Clinical manifestations, treatment. Hypovolemic shock.
  27. Foodborne toxic infections, etiology, clinical picture, diagnosis and treatment. Epidemiology and prevention of food toxic infections.
  28. Foodborne toxic infections. Etiology. Epidemiology. Pathogenesis and clinic. Diagnosis and differential diagnosis. Treatment. Prevention.
  29. Rotavirus gastroenteritis. Pathogenesis. Clinic. Diagnosis. Treatment. Prevention.
  30. Escherichiosis. Etiology. Clinic. Diagnosis. Treatment. Prevention.
  31. Botulism. Etiology. Pathogenesis. Clinic, diagnosis, treatment, prevention.
  32. Clinic, diagnosis and treatment of patients with botulism.
- Helminthiases.
33. Nematodes (ascariasis, enterobiasis). Epidemiology, pathogenesis, treatment, prevention.
  34. Etiopathogenesis, clinical picture, diagnosis and treatment of tape helminthiasis (taeniasis, teniarinychosis, diphyllbothriasis).
  35. Opisthorchiasis. Clinic, diagnosis and treatment of patients in the early phase (acute stage) and late phase (chronic stage) of parasitic infestation.
  36. Opisthorchiasis. Pathogenesis and clinic. Diagnosis and differential diagnosis. Treatment. Prevention.
- Protozoal infections
37. Toxoplasmosis. Etiology, epidemiology, clinical picture, diagnosis and treatment.
  38. Amoebiasis. Etiology, epidemiology, pathogenesis, clinical picture, diagnosis, treatment.
  39. Etiology, epidemiology, clinical picture, diagnosis, treatment, prevention of malaria.
- Skin infections.
40. Erysipelas, etiology, pathogenesis, clinical picture, diagnosis, treatment.
  41. Recurrent form of erysipelas. Pathogenesis, clinical picture, treatment.
  42. Differential diagnosis of erysipelas and abscess, phlegmon, eczema, erysipeloid.
- Viral hepatitis and HIV infection.
43. Viral hepatitis "A". Pathogenesis, clinical classification, diagnosis and treatment of patients. Clinic and diagnosis of viral hepatitis "A", "E".
  44. Viral hepatitis "E". Epidemiology, pathogenesis, clinic, diagnosis, treatment.
  45. Pre-icteric period in viral hepatitis "A" and "B", their differential diagnosis.
  46. Viral hepatitis B, cholestatic form. Clinic, diagnosis, treatment.

47. HBV, fulminant form, early clinical signs, predisposing factors. Liver coma. Causes of occurrence. Treatment. Forecast.
  48. Laboratory diagnosis of viral hepatitis A, B, C, D, G.
  49. Epidemiology and prevention of viral hepatitis "A", "B" and "C".
  50. Viral hepatitis C, pathogenesis, clinical picture, principles of treatment of the chronic form.
  51. Diagnosis and treatment of patients with viral hepatitis "B" and "C".
  52. Rehabilitation of convalescents with viral hepatitis "A", "B", "C", "D", "E"
  53. HIV infection: etiology, epidemiology, risk groups, clinical classification, clinic (stage of primary manifestations).
  54. HIV is an infection. Pathogenesis and clinic. Clinical classification. Diagnostics. Treatment.
  55. HIV infection. Epidemiology, risk groups, clinical classification. Algorithm for a doctor's actions in the event of an emergency.
- Respiratory tract infections.
56. Etiology, epidemiology, clinical picture, diagnosis and prevention of influenza.
  57. Influenza: etiology, epidemiology, clinical picture, diagnosis and treatment.
  58. Adenovirus infection. Pathogenesis, clinical picture, treatment.
  59. Parainfluenza - etiology, clinical picture, diagnosis, treatment.
  60. Influenza, emergency conditions for severe forms of influenza and their treatment.
  61. Clinic, laboratory diagnostics, treatment of ornithosis.
  62. Sore throat. Etiology. Clinic. Diagnosis. Treatment. Prevention.
  63. Diphtheria. Etiology. Etiology, epidemiology, diagnosis and treatment. Clinical picture of the toxic form of diphtheria.
  64. Diphtheria of the oropharynx. Etiology. Epidemiology. Pathogenesis and clinic. Diagnosis and differential diagnosis. Treatment. Prevention.
  65. Legionellosis. Etiology. Epidemiology. Pathogenesis. Clinic. Diagnosis.
- Treatment.
- Neuroinfections
66. Meningococcal infection. Etiology, epidemiology, pathogenesis, classification. Tactics for managing patients with meningococcal meningitis.
  67. Localized and generalized forms of meningococcal infection: clinical picture, diagnosis and treatment.
  68. Meningococemia. Clinic, diagnosis and treatment.
  69. Complications of meningococcal infection: infectious - toxic shock, cerebral hypertension syndrome. Clinical manifestations and treatment.
  70. Emergency conditions for meningococcal infection: acute swelling and swelling of the brain substance: clinical picture, diagnosis and treatment.
  71. Diagnosis and treatment of infectious-toxic shock in patients meningococcal infection.

72. Treatment of patients with meningococcal infection of localized and generalized forms.
73. Enterovirus infection, clinical picture of the main forms. Diagnostics, therapy.
74. Tick-borne encephalitis: etiology, epidemiology, clinical picture, diagnosis and treatment. Doctor's tactics when a tick attacks a patient.
75. Tick-borne encephalitis. Clinical classification. Characteristics of the meningoencephalitic form. Diagnostics. Treatment. Emergency prevention for tick bites.
76. Lyme disease. Etiology, epidemiology, Risk groups. Pathogenesis of the disease.
77. Lyme disease. Clinic, diagnosis, treatment. Emergency prevention for tick bites.
78. Epidemic typhus and Brill's disease. Etiology, epidemiology, pathogenesis, clinical picture, diagnosis, treatment.
- Herpetic infections.
79. Herpetic infection: herpes simplex (etiology, epidemiology, pathogenesis, clinical picture, diagnosis, differential diagnosis).
80. Herpetic infection: herpes zoster (etiology, epidemiology, pathogenesis, clinical picture, diagnosis, differential diagnosis).
81. Epstein-Barr infectious mononucleosis of viral etiology: etiology, epidemiology, pathogenesis, clinical picture, diagnosis, treatment, outcomes, disease prevention.
- Hemorrhagic fevers.
82. Ebola fever. Etiology. Epidemiology. Clinic. Treatment.
83. Ebola fever. Epidemiology, clinic. Algorithm for a doctor's actions when identifying a particularly dangerous infection.
84. Hemorrhagic fever with renal syndrome. Etiology, epidemiology, pathogenesis. Characteristics of the main periods of the disease.
85. Hemorrhagic fever with renal syndrome. Clinical picture. Diagnosis, treatment, prevention of disease.
- Zoonoses.
86. Tularemia: etiology, epidemiology, clinical picture, diagnosis and treatment.
87. Tularemia (classification, clinical picture, differential diagnosis, laboratory diagnosis, treatment, prevention).
88. Plague: etiology, epidemiology, pathogenesis, clinical classification, characteristics of individual forms, diagnosis, treatment.
89. Anthrax etiology, epidemiology, clinical picture, diagnosis, treatment, prevention.
90. Clinical forms of anthrax, their characteristics, treatment.
91. Leptospirosis etiology, epidemiology, clinical picture, diagnosis, treatment, prevention.
92. Brucellosis: etiology, epidemiology, clinical picture, diagnosis, treatment.
93. Principles of treatment of patients with acute and chronic brucellosis

### **The situational tasks**

Patient S., 38 years old. I went to the emergency doctor on 4.09. with complaints of constant moderate abdominal pain, single vomiting, increased body temperature to 38.6°C. From the anamnesis it is known

that 2 weeks before the illness he returned from a cruise on the Volga. I felt unwell for the first time on August 17: I was chilling and had a headache. Temperature 37.4°C. I didn't go to the doctor, I took 1 tablet of ampicillin on my own. 3 times a day. He continued to work, although he still had a low-grade fever, was chilling, and had a poor appetite. 22-23.08. manifestations of the disease disappeared, I stopped taking ampicillin. On the night from 3 to 4.09. The temperature rose again, abdominal pain appeared (mainly on the right), nausea, and there was a single vomiting.

Objectively: the condition is moderate, the skin is pale, dry, there are several pink "spots" on the stomach. The tongue is coated with a thick gray coating and is somewhat dry. The abdomen is distended, moderately painful in the ileocecal area. There is also a slight muscle tension, a mildly expressed Shchetkin's symptom. With a diagnosis of acute appendicitis, he was taken to the hospital and operated on. The vermiform appendix is moderately hyperemic and swollen. During inspection of the abdominal cavity, a significant increase in mesenteric nodes was noticed, one of them was removed for histological examination. Ulcers visible through the intestinal wall were found in the distal ileum.

Blood test: Hb-126g/l, leukocytes-6.1\*10<sup>9</sup>/l, p/i-8%, s/i-51%, lim.-38%, mon-3%, ESR-12 mm/hour . A diagnosis of acute appendicitis, ulcerative ileitis was made.

#### EXERCISE.

1. Do you agree with this diagnosis?
2. Make a diagnosis.
3. Examination and treatment plan.

Patient O., 35 years old, kindergarten teacher. I contacted my local doctor on September 11. on the 3rd day of illness with complaints of headache, sleep disturbance, weakness. She became acutely ill, within 3 days the temperature reached 39°C, she suffered from a headache, decreased appetite, began to wake up frequently at night, and became increasingly weak. She informed the doctor that over the past month there have been 2 cases of children falling ill with the "flu" in the group. Some of them had loose stools. The temperature increased over 5-8 days.

Upon examination on the 3rd day of illness, the temperature was 39.1°C. Moderate condition. The skin is pale. The oropharyngeal mucosa is clean. The tongue is dry and covered with a white coating. There are no wheezes in the lungs. Pulse 84 beats/min., blood pressure 100/60 mmHg. The abdomen is slightly painful in the navel area, soft. The stool was normal two days ago, without pathological impurities. There is no dysuria. There are no meningeal signs. The doctor diagnosed "flu" and prescribed Biseptol, aspirin, and analgin. During therapy, the temperature persisted for a week, then dropped to normal, but weakness continued to bother me for about 7 days. On the 17th day from the onset of the illness, she was discharged to work. After 12 days, the headache, cough, and temperature of 38.4°C reappeared. The local doctor noted pale skin and dry scattered wheezing in the lungs. Poor appetite, coated and swollen tongue. Pulse 72 beats/min. Bloating of the abdomen, enlargement of the liver and spleen were noted. She was hospitalized with a diagnosis of influenza and pneumonia.

#### EXERCISE.

1. Do you agree with the referral diagnosis?
2. Make a diagnosis and justify it. Make a differential diagnosis.
3. Make a plan for examination and treatment.

Patient N., 36 years old, businessman. I consulted a therapist with complaints of high fever, weakness, headache, lack of appetite, nausea, and upset stool. I became acutely ill 5 days ago: I felt unwell, at night

the temperature rose to 38.6°C, I felt chills and had a headache. Vomiting repeated twice and there was loose stool. I took anti-flu pills, but it didn't get any better. The headache and weakness increased, and the next day the temperature rose to 39°C. 10 days before the onset of illness, he returned from a tourist trip to India.

On examination, the condition is moderate, slight runny nose, hyperemia of the oropharyngeal mucosa. There is a profuse maculopapular rash on the skin of the trunk and limbs, which the patient did not see yesterday. The lymph nodes are not enlarged, there is no wheezing in the lungs. Pulse 88 beats/min, blood pressure 120/60 mmHg. The tongue is covered with a white coating and thickened. The abdomen is soft, slightly painful in the right iliac region. There are no symptoms of peritoneal irritation. Loose stools, twice a day. The liver and spleen are palpable. There are no meningeal symptoms.

#### EXERCISE.

1. Make and justify the diagnosis.
2. What diseases need a differential diagnosis?
3. Draw up an examination plan and patient management tactics.

Patient K., 61 years old, was hospitalized with a diagnosis of acute dysentery. Upon admission, he complained of pain in the lower abdomen, radiating to the sacrum, stool up to 5 times a day with mucus and blood, and an increase in temperature to 38.2°C. I have been sick for 4 days. The illness began with fever, abdominal pain, malaise, and diarrhea (the frequency of stools during the days of illness increased to 2-5 times a day). From the first day I noticed an admixture of blood in my stool. Temperature ranges from 37.1 to 37.6°C. The life history was unremarkable, but for 3-4 months he noted stool retention for 2-3 days, streaks of blood in the stool, general weakness, and fatigue.

Examination data: the patient is pale. Lymph nodes are not enlarged. There are no pathologies from the cardiovascular system or respiratory organs. The tongue is covered with a white coating. The abdomen is soft, the sigma is infiltrated, dense, sensitive to palpation, inactive. The liver is enlarged by 3 cm, dense. The stool (examined) is fecal, mushy with an admixture of mucus, blood and pus.

#### EXERCISE.

1. Do you agree with the diagnosis?
2. If not, then why?
3. Between what diseases should a differential diagnosis be made?
4. Examination plan.

Patient A., 32 years old, was admitted on June 7. diagnosed with dysentery with complaints of severe weakness, headache, abdominal pain, frequent loose stools with mucus and blood. She became ill on June 4, when chills and fever appeared, the temperature rose to 37.8°C, and she had loose stools once. 5.06. the condition worsened - the temperature rose to 38.3°C, stools were loose and profuse 3 times, abdominal pain appeared without clear localization. 6.06. The frequency of stools increased up to 8 times, an admixture of mucus and blood appeared, and abdominal pain became more intense.

The patient's condition upon admission was moderate, temperature 38.8°C, pallor of the skin attracted attention. Heart sounds are muffled. Pulse 108 beats/min, blood pressure 100/50 mmHg. The tongue is moist, thickly coated with white coating. The abdomen is soft, painful along the large intestine. The liver is enlarged by 2 cm, the spleen is clearly palpable. The stool is loose, fecal, with a lot of mucus and blood. Blood test: Hb-98g/l, leukocyte count-12.4\*10<sup>9</sup>/l, ESR-24mm/h.

Sigmoidoscopy: The tube is inserted freely to 22 cm, further examination is difficult due to the large amount of bloody and mucous contents. In the examined segment, the mucous membrane is sharply

swollen, hyperemic, protrudes into the intestinal lumen, contact bleeding is pronounced, and in places there are fibrin deposits and erosions. Biopsies of the mucous membrane were taken.

#### EXERCISE.

1. Establish and justify a preliminary diagnosis.
2. Make a differential diagnosis with dysentery.
3. Draw up a plan for managing the patient.

Patient D., 65 years old, pensioner, was admitted to the emergency department of the city hospital on October 29. on the second day of illness with a diagnosis of acute gastroenteritis. Complaints of sharp pain in the abdomen without clear localization, aggravated by movement, dry mouth, loose stools with mucus and blood. I became acutely ill on October 28. in the evening, a few hours after dinner. Sharp, constant pain appeared in the lower abdomen. Several times I had loose stools with blood and severe weakness. I took papaverine. 29.10. During the day the complaints are the same.

Due to ongoing abdominal pain, he called an ambulance and was hospitalized. Epidemiological history: lives alone in a separate apartment, eats at home. Denies contact with patients who have had gastrointestinal disorders. He attributes his illness to eating stale sour cream at dinner.

An objective examination revealed: the general condition is serious. Conscious but restless. The skin is pale earthy in color. Acrocyanosis and coldness of the extremities are pronounced. Reduced nutrition. Lymph nodes are not enlarged. Percussion over the lungs is a sound with a boxy tint. On auscultation - hard breathing, scattered dry rales. BH - 24 per minute. The borders of the heart are expanded to the left. Heart sounds are muffled, there are single extrasystoles. Pulse 86 beats/min., blood pressure 160/100 mmHg. The tongue is dry, covered with a brown coating. The abdomen is soft, painful on palpation in the middle and lower parts, and participates in the act of breathing.

The sigmoid and cecum are soft and elastic. The liver and spleen are not palpable. Peristalsis is not heard. The stool in the emergency room is fecal with a small amount of blood with clots.

#### EXERCISE.

1. Indicate the most likely diagnosis.
2. What anamnestic data would you like to receive additionally?
3. Make a differential diagnosis with dysentery.
4. What is the tactics for introducing the patient?

Patient U., 21 years old, a kindergarten teacher, consulted a doctor at the outpatient clinic on May 24 with complaints of severe weakness, chills, cramping pain in the lower abdomen, more on the left, and loose stools. Considers himself sick since 16:00. 23.05, when suddenly strong cramping pain in the lower abdomen, weakness, and chills appeared. An hour later, mushy stools appeared (6 times per evening). At about 20.00 there was a short fainting spell. In the following hours, she noted dizziness and a feeling of lightheadedness every time she tried to get out of bed.

In the kindergarten where the patient works, 20.05. and 21.05. several children were hospitalized with suspected acute dysentery. When examined by a doctor, it was revealed: body temperature

36,0°C. Correct physique, satisfactory nutrition. The skin and visible mucous membranes are pale. There is vesicular breathing in the lungs, no wheezing. The sigmoid colon is soft, painless, and not spasmodic. The liver and spleen are not enlarged. There are no dysuric phenomena. Tapping the kidney area is painless. There are no meningeal phenomena. Married. Notes a delay of menstruation by 7 weeks.

#### EXERCISE.

1. Do you agree with the referral diagnosis?



2. Justify the most likely diagnosis.
3. Specify the tactics of patient management