

Clinical Medicine and Public Health

Sample test

There are 30 tasks in total: 28 questions, and 2 problems
Each question has one correct answer.

Evaluation criteria

For each correctly answered test question, 2.5 points are awarded.

For a correctly solved problem, 15 points are awarded.

The maximum score is 100 points.

1. Coombs' test is used to diagnose:
 - a. immune hemolytic anemias**
 - b. non-immune hemolytic anemias
 - c. megaloblastic anemias
 - d. iron deficiency anemias

2. The megaloblastic type of hematopoiesis is characteristic of:
 - a. iron deficiency anemia
 - b. B12 deficiency anemia**
 - c. hemolytic anemia
 - d. thalassemias

3. Which diagnostic method is considered to be the gold standard in the detection of helicobacter pylori?
 - a) histology test**
 - b) urea breath test
 - c) stool antigen test
 - d) serum IgG antibodies

4. What is the most likely etiology of chronic gastritis type A?

- a) **pernicious anaemia**
- b) NSAID-associated
- c) smoking
- d) chronic alcohol consumption

5. The main port-caval anastomoses are located:

- a) in the head and neck area;
- b) in the chest cavity and in the lower limb;
- c) **in the area of the anterior abdominal wall, in the area of the cardiac part of the stomach and on the rectum;**
- d) in the pelvic cavity, in the cranial cavity and in the heart.

6. The vital capacity of the lungs (VC) is:

- a. the maximum volume of air that enters the lungs during inhalation;
- b. the maximum volume of air that leaves the lungs during exhalation;
- c. **the maximum volume of air that enters the lungs during inhalation and exits during exhalation.**

7. Of the lesions of the cardiovascular system for systemic scleroderma, the most typical development is:

- a) mitral stenosis;
- b) aortic insufficiency;
- c) **large-focal cardiosclerosis;**
- d) aseptic warty endocarditis.

8. Creatorrhea is typical for:

- a) **chronic pancreatitis;**

- b) Crohn's disease;
- c) irritable bowel syndrome;
- d) gallbladder dyskinesia.

9. What is the correct definition of public health as a science:

- a. it is the science of the strategy and tactics of the health care system aimed at improving the public health of the population**
- b. it is a science that studies the influence of environmental factors on a person and develops optimal requirements for the conditions of human life
- c. it is a system of measures to protect the health of the population.

10. The provision (including preferential) of the population with medicines within the framework of state guarantee programs includes everything except

- a. streamlining and ensuring the targeted provision of benefits
- b. formation of lists of medicines and medical products for preferential provision
- c. formation of lists and volumes of medicines and medical devices for the treatment of socially significant diseases
- d. Prioritizing the categories of citizens and socially communicable diseases for the preferential provision of medicines and medical care**

11. Iatrogenic diseases are:

- a. a particular case of psychogenic diseases
- b. unwanted mental changes caused by the doctor
- c. mental disorders as a reaction to what the doctor said
- d. all of the above**

12. Medical ethics:

- a. this is a specific manifestation of general ethics in the work of a doctor

b. it is a science that considers issues of medical humanism, problems of duty, honor, conscience and dignity of medics

c. it is a science that helps to develop the physician's moral responsibility

d. all of the above

13. In relation to the system of social development of any state, the health care system is:

a. an independent structure in the system

b. a subsystem

c. a sector of the system

d. a satellite system

14. What are the stages of the statistical study:

a) collection of material

b) drawing up a research plan and program

c) statistical data processing

d) all of the above

15. At what stage of the statistical research are the layouts of statistical tables created:

a) when drawing up a research plan

b) at the stage of collecting material

c) at the stage of statistical processing of materials

d) when analyzing the results

16. The arithmetic mean is:

a) options with the highest frequency

b) the difference between the largest and the smallest values

c) **a generalizing value characterizing the size of the variable attribute of the population**

d) the option located in the middle of the row

17. Under what conditions is only the rank correlation coefficient applied:

a) **when only indicative data on the availability of communication are required**

b) when the series of distribution of the values of interrelated characteristics have only closed variants

c) when distribution series of related characteristics are quantified

d) all of the above

18. The maternal mortality rate is calculated using the formula:

a) **the number of deaths of pregnant women, parturient women and parturient women (including deaths within 42 days after the termination of pregnancy) divided by the number of live births and multiplied by 100,000**

b) the number of pregnant women who died, divided by the total number of pregnant women and multiplied by 1000

c) the number of deaths of pregnant women, parturient women and parturient women divided by the female population and multiplied by 1000

d) the number of pregnant women who died, divided by the total number of pregnant women and multiplied by 100

19. Which tasks do doctors of outpatient clinics perform:

a) diagnosis and treatment of diseases

b) preventive work

c) health education

d) **all of the above**

20. According to WHO recommendations, "the quality of medical care" can be defined as:

a) the content of the doctor-patient interaction based on the qualifications of the doctor, the minimum risk to the patient, the optimal use of resources and the patient's satisfaction from the interaction with the healthcare system

b) high-quality treatment and diagnostics

c) a category that expresses its essence, which is inseparable from an object due to which this object is precisely what it is and not another object

d) general characteristics of objects, manifested in the totality of their properties

21. To ensure an appropriate level of medical care, it is necessary to meet the following conditions ...

a) achievement of medical and social indicators

b) compliance with medical and organizational protocols

c) creation of the appropriate system of medical care, adherence to medical protocols and the achievement of planned results

d) preparation of medical facilities, qualified staff, achievement of planned results

22. Health insurance is

a) payment for medical services through an insurance company

b) the form of social protection of the interests of the population in the field of health protection

c) payment for treatment and medicines at the expense of accumulated funds

d) medical care of the population at the expense of an insurance organization

23. The adrenal glands develop from:

a). neuroectoderm

b) the epithelium of the oral cavity

- c) coelomic epithelium
- d) outgrowth of the intestinal wall

24. If there are large follicles in the thyroid gland, then this corresponds to its:

- a) hypofunction**
- b) hyperfunction
- c) both
- d) neither

25. Membrane organelles include:

- a) centrioles
- b) microtubules
- c) filaments
- d) mitochondria**

26. A patient with a central nervous system disease who was taking Methyldopa developed hemolytic anemia, which quickly resolved after he had stopped taking the medication. The type of hypersensitivity causing this complication is called:

- a) reaginic
- b) immunocomplex
- c) cytotoxic**
- d) cellular

27. A side effect of inhaled glucocorticosteroids is

- a) diabetes mellitus
- b) arterial hypertension
- c) osteoporosis
- d) oral candidiasis**

28. Arterial vasodilators are

- a) angiotensin receptor blockers
- b) ACE inhibitors
- c) postsynaptic alpha-blockers
- d) **dihydropyridines**

29. Patient K., a 55-year-old male, an engineer

Complaints: admitted to the emergency department complaining about chest pain similar to burning, which radiated to the back. He had never experienced these symptoms before.

Medical history: the patient considered himself perfectly healthy before the pain attack; exercises regularly.

Family history of cardiovascular diseases (father had a myocardial infarction at the age of 45, and mother had an ischemic stroke at the age of 65).

The patient has been smoking for 35 years, about 30 cigarettes a day.

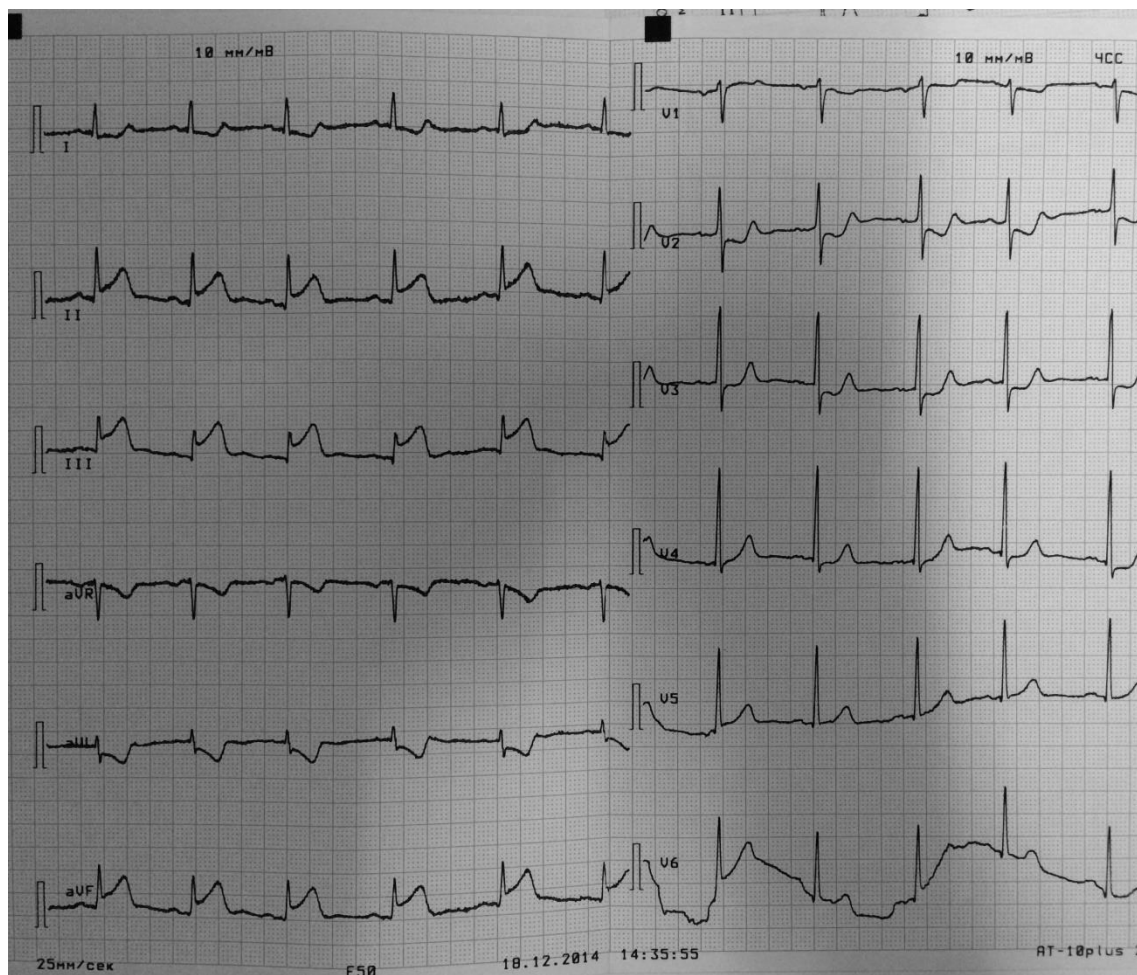
Physical examination: excessive sweating, HR 90 bpm, BP 160/100 mm Hg, RR 22 breaths per minute, and oxygen saturation - 96%, room air. Auscultation of the chest reveals clear lung fields, regular heart rhythm.

Laboratory tests: total cholesterol level - 240 mg/dl (N < 200 mg/dl), LDL cholesterol - 170 mg/dl (N < 130 mg/dl).

Instrumental methods:

Chest X-ray shows clear lungs and a normal cardiac silhouette.

The electrocardiogram (ECG) is shown below.



Questions:

1. What is the most likely diagnosis? Give your explanation
2. What additional tests are required to confirm the diagnosis?
3. Suggest a treatment strategy

30. In city P. 1 800 people were diagnosed with lung cancer during a year, including 250 newly diagnosed cases. The population is 300 000 people.

An oncologist studied risk factors associated with lung cancer among the population of the city. The doctor identified the following ones: smoking ($r=+0,74$), COPD ($r=+0,41$), occupational health risk ($r=+0,47$), and genetic predisposition ($r=+0,32$).

Questions:

1. Calculate the indicators, which characterize lung cancer morbidity of the population in city P. Give definitions for the indicators
2. What statistical method was used to assess the influence of lung cancer risk factors? Evaluate the presented data and draw conclusions.
3. Propose measures for primary, secondary and tertiary prevention of lung cancer.