STATE NON-PROFIT ENTERPRISE
«TESTING BOARD FOR PROFESSIONAL COMPETENCE ASSESSMENT OF HIGHER EDUCATION TRAINEES IN MEDICINE AND PHARMACY AT THE MINISTRY OF HEALTH OF UKRAINE»

Student ID								

Surname										

Variant 48

TEST ITEMS
FOR THE UNIFIED STATE QUALIFICATION EXAM

STAGE 1

ENGLISH LANGUAGE PROFICIENCY TEST

Specialty «MEDICINE»

I. Read the text and answer 10 questions to it.

Schola Medica Salernitana

The Schola Medica Salernitana is the first formal medical teaching school emerged from the European Dark Ages in the 9th century CE in Salerno, southern Italy. It drew on influences from Islamic, Jewish, Greek, and Roman medicine. For four centuries, the reputation of this school, Schola Medica Salernitana, as a centre of teaching excellence was probably unrivalled in medieval Europe. Students, teachers, and those seeking medical treatment travelled long distances to reach Salerno. In 1099, for example, Robert II of Normandy travelled from northern France to receive medical attention. Salerno had the world's most extensive medical library, with texts by Islamic physicians al-Razi (854-925) and Ibn Sina (980-1037), and other texts from Montecassino reflecting the teachings of ancient Greece and Rome. The school provided thorough curriculum-based teaching, typically with three years of study followed by four years of hands-on training. Women were welcomed as students and teachers at Salerno. In the early or mid-12th century, the most prominent of these was Trota (or Trocta), a physician, educator, and writer. Her specialities were gynaecology and midwifery, but she gave students a grounding in a range of diagnostic tools, including how to analyse urine, check pulse rates, and examine skin tone. Salerno's reputation peaked in the late 12th century, when Rogerius (c. 1140-95) became its most famous teacher and surgeon. His Practica Chirurgiae (Practice of Surgery) was considered a standard text for at least 300 years. Written in 1180, it was the first work to deal with treatments arranged anatomically, describing diagnoses and treatments for diseases and disorders of the head, neck, arms, chest, abdomen, and legs. Rogerius's pioneering work included methods for detecting tears in the cerebral membrane (the Valsalva manoeuvre) and realigning damaged tissues (reanastomosis). By the 12th century, other medical schools had been set up in Europe, including those at Montpellier in France, Bologna and Padua in Italy, Coimbra in Portugal, Vienna in Austria, and Heidelberg in Germany - all modelled on Salerno. French surgeon Guy de Chauliac (c. 1300-68) studied at Montpellier and Bologna, and was appointed to the most prestigious position in Europe - personal physician to Pope Clement VI. Chauliac's Chirurgia Magna (Great /work on Surgery) covered an array of subjects, including anatomy, anaesthetics, bloodletting, drugs, fractures, and wounds. The seven-volume text was translated from Latin into many languages and became a new authority for surgeons until the 17th century, when new medical theories began to emerge.

1. Choose the correct statement regarding the influence of the Schola Medica Salernitana on other European medical schools:

A. It had no influence beyond Italy
B. It was closed down by the local government in the 12th century
C. It inspired the establishment of several medical schools across Europe
D. It focused exclusively on theoretical teachings

2. What marked the decline of the Schola Medica Salernitana's influence in the 17th century?

A. Emergence of new medical theories
B. Internal conflicts among teachers
C. Loss of funding from wealthy patrons
D. Closure by the local government

3. In addition to Salerno, which other European city had a renowned medical school by the 12th century?

A. Florence, Italy
B. Montpellier, France
C. Oxford, England
D. Athens, Greece

4. What was Rogerius's pioneering contribution to medical literature?

A. Methods for detecting brain tumors
B. Anatomically arranged treatments in surgery
C. Herbal remedies for respiratory diseases
D. Techniques for spinal surgery

5. Women were not allowed to study or teach at the Schola Medica Salernitana.

A. False
B. True
C. Not given

6. Who was Trota (or Trocta), noted for her contributions to medicine at Salerno?

A. A historian of medicine
B. A physician specializing in gynaecology and midwifery
C. A famous surgeon
D. A prominent teacher of anatomy

7. In what century did the Schola Medica Salernitana reach its peak reputation?

A. 12th century
B. 11th century
C. 8th century
D. 9th century

8. Students, teachers, and patients traveled long distances to reach Salerno due to its reputation as a medical center.

A. False
B. Not given
C. True

9. Which statement accurately describes the curriculum at the Schola Medica Salernitana?

A. It offered no practical training, focusing solely on theoretical study
B. It was known for its specialization in psychiatric medicine
C. Women were excluded from medical education
D. Students typically completed three years of study followed by four years of practical training

10. Which pope appointed Guy de Chauliac as his personal physician?

A. Pope Gregory IX
B. Pope Boniface VIII
C. Pope Clement VI
D. Pope Innocent III

II. Choose the right answer.

11. During examination, a 52-year-old man has asthenia, muscle dystonia, and a balance disorder. What part of the central nervous system is affected in this case?

A. Substantia nigra
B. Cerebellum
C. Vestibular nuclei
D. Red nuclei
E. Reticular formation

12. Laboratory testing detects hyperchromia of erythrocytes, as well as megalocytes and megaloblasts, in the blood of a 28-year-old woman. What type of anemia has occurred in the patient?

A. Hemolytic anemia
B. B_{12} deficiency anemia
C. Posthemorrhagic anemia
D. Hypoplastic anemia
E. Iron deficiency anemia

13. A 39-year-old man has been diagnosed with epidemic recurrent typhus. What fever curve is typical of this disease?

A. *Febris hectica-intermittens*
B. *Febris hectica*
C. *Febris intermittens*
D. *Febris continua*
E. *Febris recurrens*

14. A histological specimen of an eyeball shows a biconvex structure, connected to the ciliary body with the fibrous strands of the ciliary zonule and covered on top with a transparent capsule. What structure is it?

A. Cornea
B. Vitreous body
C. Crystalline lens
D. Ciliary body
E. Sclera

15. Liver diseases are usually accompanied by coagulopathy, namely hypocoagulation. What is this pathological condition associated with?

A. Decreased synthesis of bile acids
B. Decreased levels of calcium in the blood
C. Impaired pigment metabolism
D. Decreased synthesis of prothrombin and fibrinogen
E. Activation of blood coagulation factors

16. A 45-year-old man has been hospitalized into the intensive care unit with heavy metal poisoning. What diuretic should be prescribed in this case to induce forced diuresis?

A. Acetazolamide
B. Hydrochlorothiazide
C. Ammonium chloride
D. Spironolactone
E. Furosemide

17. Autopsy of the body of a 67-year-old man, who died of chronic cardiovascular failure, revealed macrophages with a brown pigment in the alveoli of the lungs. This finding indicates accumulation of a certain pigment. Name this pigment.

A. Ferritin
B. Hematin
C. Hemosiderin
D. Porphyrin
E. Hematoidin

18. A 65-year-old patient has been diagnosed with a myocardial

infarction. His blood was tested for the activity of cardiospecific enzymes. Which one of the detected enzymes has three isoforms?

A. Alanine transaminase
B. Lactate dehydrogenase
C. Creatine kinase
D. Aspartate transaminase
E. Pyruvate kinase

19. Transcription is the process of RNA synthesis that uses DNA as a matrix. Name the stages of transcription.

A. Processing, splicing, termination
B. Initiation, processing, splicing
C. Initiation, translation, elongation
D. Initiation, elongation, termination
E. Initiation, elongation, translation

20. During local anesthetization a man developed anaphylactic shock. What drug must be administered in this case?

A. Epinephrine
B. Diazepam
C. Propranolol
D. Atropine sulfate
E. Nitroglycerin

21. A 35-year-old man came to a gastroenterologist with complaints of belching, a feeling of overfilled stomach, nausea, lack of appetite, and nocturnal epigastric pain. The doctor suspects a gastric ulcer caused by *H. pylori* invasion. What rapid noninvasive diagnostic test should be prescribed to the patient to confirm the diagnosis?

A. Enzyme immunoassay
B. Urease activity of *H. pylori* in smears from the gastric biopsy material
C. Complement fixation test
D. Rapid urease test
E. Polymerase chain reaction

22. In a 39-year-old woman diagnosed with a malignant lung tumor, CT has revealed new foci in different locations. What process causes these phenomena?

A. Expansive growth
B. Metaplasia
C. Anaplasia
D. Infiltrative growth
E. Metastasis

23. A 25-year-old woman has been diagnosed with bartholinitis (inflammation of the greater vestibular glands). What organ of the genitourinary system contains these glands?

A. Uterus
B. Vagina
C. Labia minora
D. Labia majora
E. Clitoris

24. Some motile cells of multicellular organisms have special organelles that are thin extensions of cytoplasm, containing a bundle of microtubules — an axial filament or axoneme. What are these organelles called?

A. Microtubules
B. Microvilli
C. Flagella
D. Undulating membrane
E. Stereocilia and kinocilia

25. Autopsy of the body of a 47-year-old man detects an ulcer 3 cm in diameter on the posterior gastric wall. The ulcer penetrates into the pancreatic tissue adjacent

to the intestine. There are multiple steatonecroses in the area of the ulcer in the pancreas and in the surrounding fatty tissue. What complication of peptic ulcer disease has occurred in this man?

A. Penetration
B. Perforation
C. Phlegmon of the gastric wall
D. Malignization
E. Stenosis

26. A 58-year-old woman with essential hypertension was prescribed amlodipine by her doctor. What group of drugs does it belong to?

A. Potassium channel blockers
B. Potassium channel activators
C. Sodium channel blockers
D. β-blockers
E. Calcium channel blockers

27. When performing right-sided lobectomy, the surgeon operates near the root of the right lung to isolate its structures. List the elements of the root of the right lung in their order from top to bottom.

A. Pulmonary vein, pulmonary artery, bronchus
B. Pulmonary artery, bronchus, pulmonary veins
C. Bronchus, pulmonary artery, pulmonary veins
D. Phrenic nerve, bronchus, bronchial artery and bronchial vein
E. Bronchus, pulmonary artery, phrenic nerve

28. Autopsy of the body of a 49-year-old woman, who had community-acquired pneumonia and died of pneumococcal sepsis, revealed up to 700 mL of turbid greenish-yellow fluid with an unpleasant odor in the left pleural cavity. The pleural layers are dull and plethoric. What pathological process occurred in the pleural cavity of the deceased woman?

A. Fibrinous inflammation
B. Empyema
C. Acute abscess
D. Phlegmon
E. Chronic abscess

29. During the surgery for a femoral hernia, the surgeon operates within the borders of the femoral triangle. What structure forms its upper border?

A. *Lig. lacunare*
B. *Lig. pectinale*
C. *Lig. inguinale*
D. *Fascia lata*
E. *Arcus iliopectineus*

30. Two soldiers, who were bitten by ticks during training in a forest area, came to a medical station with complaints of fever, chills, general weakness, and headache. Objectively, the site of the bite exhibits redness with a clearly visible center surrounded by a flat peripheral zone that expands. What disease can be diagnosed in these soldiers?

A. Chickenpox
B. Three-day malaria
C. Epidemic typhus
D. Lyme disease
E. Q fever

31. What acid-base imbalance can be observed in the patients with accumulation of ketone bodies in blood serum?

A. Respiratory alkalosis
B. Metabolic alkalosis
C. Respiratory acidosis
D. Metabolic acidosis
E. Mixed alkalosis

32. A person has been hospitalized

into the trauma department of a hospital with an open fracture of the humerus, severe bleeding, and damage to a blood vessel that runs along with the *n. axillaris* in the *foramen quadrilaterum*. What vessel is it?

A. *A. circumflexa scapulae*
B. *A. brachialis*
C. *A. circumflexa humeri anterior*
D. *A. profunda brachii*
E. *A. circumflexa humeri posterior*

33. Hemophilia B is caused by deficiency of a certain blood clotting factor. Name this factor.

A. VIII
B. VII
C. XI
D. V
E. IX

34. During the lunch, a person ate salted herring and potatoes with pickles. After a while, this person became thirsty. This sensation has been caused by the signal sent by certain receptors. Name these receptors.

A. Osmoreceptors in the hypothalamus
B. Volume receptors in the venae cavae and atria
C. Volume receptors in the hypothalamus
D. Baroreceptors in the aortic arch
E. Osmoreceptors in the liver

35. A phthisiologist has prescribed a semi-synthetic antibiotic to a patient with tuberculosis. This drug has a bactericidal effect on *Mycobacterium tuberculosis*, because it inhibits RNA synthesis. However, the doctor has warned the patient that his saliva, sputum, and tear fluid may color red as a result. What drug has been prescribed by the doctor?

A. Ftivazide
B. Ethambutol
C. Rifampicin
D. Isoniazid
E. Lomefloxacin

36. A 25-year-old woman diagnosed with myasthenia gravis was prescribed a drug by a neurologist to improve her muscle function. Administering of the drug was accompanied by increased salivary gland secretion, lacrimation, sweating, and diarrhea. What drug was prescribed by the doctor in this case?

A. Atropine sulfate
B. Neostigmine
C. Atorvastatin
D. Epinephrine
E. Pilocarpine

37. A patient presents with smoothed out right nasolabial fold and dilated right palpebral fissure (it cannot be closed during squinting, because the eyelids would not close). The patient has difficulty talking and eating (food becomes stuck between the cheek and teeth). What nerve is damaged in this case?

A. *N. glossopharyngeus sinister*
B. *N. vagus dexter*
C. *N. facialis dexter*
D. *N. abducens*
E. *N. trigeminus dexter*

38. A 55-year-old man diagnosed with radiation sickness has been hospitalized into the intensive care unit with signs of hemorrhagic syndrome. What changes in the laboratory findings are the main ones in the pathogenesis of this pathological condition?

A. Lymphopenia
B. Neutropenia
C. Thrombocytopenia
D. Eosinopenia
E. Erythropenia

39. A 26-year-old man came to an endocrinologist. Objectively, his height is 120 cm, he has proportional built and his mental development is normal. These signs are characteristic of insufficient synthesis of a certain hormone during his childhood years. Name this hormone.

A. Adrenocorticotropic hormone
B. Thyrotropin
C. Gonadotropin
D. Somatotropin
E. Thyroxine

40. Bile components are necessary for digestion and absorption of fats. What bile component is necessary for the emulsification of lipids?

A. Bile acids
B. Bilirubin
C. Alanine aminotransferase
D. Phospholipids
E. Cholesterol

41. Autopsy of the body of a 56-year-old man, who had fibro-cavernous pulmonary tuberculosis, revealed an enlarged dense spleen. On section, the spleen tissue is brownish-pink, smooth, with a waxy surface. What pathological process is most likely being observed in the spleen in this case?

A. Variant of the norm
B. Glazed spleen
C. Lardaceous spleen
D. Porphyry spleen
E. Cyanotic induration

42. A 68-year-old man has been diagnosed with hemorrhage in the anterior hypothalamus, which resulted in polyuria. What hormone is deficient in this case, resulting in decreased water reabsorption in the renal tubules?

A. Adrenaline
B. Aldosterone
C. Oxytocin
D. Calcitonin
E. Vasopressin

43. In an experiment, the test animal was accidentally given a large amount of potassium chloride, resulting in its death. What caused the cardiac arrest in the animal in this situation?

A. Depolarization of the cardiac muscle and cardiac arrest in the diastole
B. Hyperpolarization of the cardiac muscle and cardiac arrest in the systole
C. Hyperpolarization of the cardiac muscle and cardiac arrest in the diastole
D. Ventricular fibrillation
E. Depolarization of the cardiac muscle and cardiac arrest in the systole

44. One month after giving birth, a 25-year-old woman came to a doctor complaining of decreased breast milk supply. What hormone is deficient in this case, causing this pathological condition?

A. Adrenocorticotropic hormone
B. Insulin
C. Somatostatin
D. Glucagon
E. Prolactin

45. Laboratory tests detect signs of atherosclerosis in a 67-year-old woman. What transport forms of lipids are elevated in the patient's blood plasma?

A. Intermediate-density lipoproteins
B. High-density lipoproteins
C. Chylomicrons
D. Low-density lipoproteins
E. Very low-density lipoproteins

46. A 57-year-old man during examination presents with ascites, enlarged spleen, and esophageal varices. Histology of the biopsy material obtained from the liver reveals micronodular cirrhosis. What process has complicated the hepatic cirrhosis in this case?

A. Budd-Chiari syndrome
B. Portal hypertension syndrome
C. Hepatorenal syndrome
D. Heart failure
E. Hepatocellular dysfunction

47. In a 49-year-old man, laboratory blood gas test reveals decreased levels of CO_2 — hypocapnia. What pathological condition has developed in the patient?

A. Respiratory acidosis
B. Metabolic alkalosis
C. Respiratory alkalosis
D. Disseminated intravascular coagulation (DIC syndrome)
E. Thalassemia

48. To confirm the diagnosis of meningitis, a 45-year-old man needs to undergo diagnostic puncture of the subarachnoid space between the arches of the lumbar vertebrae (L3–L4). What ligament located along the spinal column is pierced with the needle, when this puncture is being performed?

A. Iliopsoas
B. Flavum
C. Posterior longitudinal
D. Anterior longitudinal
E. Intertransverse

49. Aldosterone regulates sodium levels in the body. What cells in the adrenal glands produce this hormone?

A. Zona fasciculata cells
B. Norepinephrine cells
C. Zona reticularis cells
D. Zona glomerulosa cells
E. Epinephrine cells

50. A bacteriological laboratory has received a material obtained from a patient diagnosed with peritonitis. Microscopy of the material revealed Gram-positive and Gram-negative microorganisms. What morphological structure of a bacterial cell causes Gram staining?

A. Spores
B. Cytoplasm
C. Capsule
D. Flagella
E. Cell wall