



**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									
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Variant 19

**TEST ITEMS  
FOR THE UNIFIED STATE QUALIFICATION EXAM**

**STAGE 1**

**ENGLISH LANGUAGE PROFICIENCY TEST**

**Specialty «STOMATOLOGY»**

**I. Read the text and answer 10 questions to it.****The discovery of insulin**

Pandemics are outbreaks of infectious disease spread over multiple countries. Some spread rapidly but are less damaging, such as the pandemic swine flu of 2009. Others spread slowly but are highly dangerous, such as Ebola. A few spread quickly and make many who catch it very ill. The COVID-19 outbreak that erupted in 2020 is one such pandemic. The Great Influenza was one of the most devastating pandemics in history, killing 50 million people in the wake of World War I. Like COVID-19, this was caused by a virus - now identified as a deadly strain of the H1N1 influenza virus. A major discovery in the century between these two outbreaks is that all it can take to trigger a pandemic is a tiny chance mutation in a virus, especially an influenza virus or a coronavirus such as the virus that causes COVID-19. That mutation conceals the virus's identity, leaving the human body defenceless. The proximity of people and animals in the modern world makes such mutations highly likely. Pandemics are complex global threats that test to the limits how people and governments behave. Epidemiologists have made much progress in understanding how an epidemic spreads from one area to multiple countries (at which point it becomes a pandemic), and experts provide detailed protocols for taking action. Yet vaccines remain the one proven weapon against such outbreaks. In 2005 - more than 80 years after the Great Influenza pandemic - American virologist Jeffery Taubenberger revealed the complete genetic structure of the 1918 H1N1 virus, enabling it to be reconstructed and analysed. This was a landmark achievement in increasing scientists' ability to pin down the exact nature of a mutant virus and provide the necessary data to create a vaccine quickly.

1. American virologist Jeffery Taubenberger developed a vaccine for the 1918 H1N1 virus.

- A. Not given
- B. True
- C. False

2. What is the common feature of both influenza viruses and coronaviruses mentioned in the text?

- A. They are unrelated to pandemics
- B. They can conceal their identity through mutation
- C. They are always slow-spreading viruses
- D. They are resistant to vaccines
- E. They are caused by bacteria

3. What was the cause of the Great Influenza pandemic in the wake of World War I?

- A.** A deadly strain of H5N1 influenza virus
- B.** A strain of H1N1 influenza virus
- C.** A highly contagious form of Ebola
- D.** A variant of the common cold virus
- E.** A coronavirus similar to COVID-19
4. What is mentioned as a potential trigger for a pandemic in the modern world?
- A.** Widespread hand hygiene practices
- B.** Improved healthcare systems
- C.** Decreased international travel
- D.** Strict quarantine measures
- E.** Increased human-animal proximity
5. What major discovery occurred in the century between the Great Influenza and COVID-19 outbreaks?
- A.** The understanding of how pandemics occur due to climate change
- B.** The eradication of all influenza viruses
- C.** The development of effective vaccines against all viruses
- D.** The critical role of vaccines in preventing pandemics
- E.** The discovery of a highly effective antiviral medication
6. According to the text, what remains the one proven weapon against pandemics?
- A.** Antibiotics
- B.** Social distancing
- C.** Vaccines
- D.** Hygiene practices
- E.** Quarantine measures
7. Why is it mentioned that some pandemics spread slowly but are highly dangerous, like Ebola?
- A.** Because Ebola is an airborne virus
- B.** Because Ebola causes mild symptoms
- C.** Because it's a highly contagious virus
- D.** Because the Ebola virus conceals its identity
- E.** Because Ebola is caused by a bacterium
8. Ebola is caused by a highly contagious virus that spreads rapidly.
- A.** Not given
- B.** False
- C.** True
9. What is the primary role of epidemiologists in addressing pandemics?
- A.** Providing medical treatment to infected individuals
- B.** Studying the behavior of government officials
- C.** Developing vaccines
- D.** Understanding how epidemics become pandemics
- E.** Analyzing genetic mutations in viruses
10. Epidemiologists have provided detailed protocols for taking action against pandemics, including measures other than vaccines.
- A.** False
- B.** True
- C.** Not given

## II. Choose the right answer.

11. Histology of a jaw bone tumor shows that it consists of epithelial islands with signs of cellular atypism and a small amount of keratinized substance in their center — "cancer pearls". What oncological condition has developed in the patient?

- A. Ameloblastic odontosarcoma
- B. Burkitt's tumor
- C. Ameloblastic fibrosarcoma
- D. Malignant ameloblastoma
- E. Primary intraosseous carcinoma

12. A baby has a delay in eruption of the first teeth. What vitamin is deficient in this baby?

- A. PP
- B. A
- C. K
- D. D<sub>3</sub>
- E. E

13. A 71-year-old man with angina pectoris takes 100 mg of acetylsalicylic acid daily. For what purpose does this patient take acetylsalicylic acid?

- A. Inhibition of blood coagulation
- B. Dilation of the coronary vessels
- C. Inhibition of platelet aggregation
- D. Reduction of cholesterol levels
- E. Reduction of prothrombin levels

14. For preventive purposes, during a surgery on the maxilla, a patient with increased bleeding was administered a drug that improves blood coagulation by increasing the synthesis of prothrombin and other blood

clotting factors (VI, VII, IX, X) that takes place mainly in the liver. What drug was administered in this case?

- A. Neodicoumarin (Ethyl biscoumacetate)
- B. Heparin
- C. Vikasol (Vitamin K)
- D. Ascorbic acid
- E. Cyanocobalamin

15. A man has been diagnosed with gigantism. What endocrine gland is dysfunctional in this case?

- A. Pineal gland
- B. Adrenal glands
- C. Pituitary gland *is hormonal*
- D. Thyroid gland
- E. Thymus

16. A histological specimen demonstrates a blood vessel. Its tunica intima consists of endothelium, subendothelium, and internal elastic lamina. The tunica media is lined with smooth muscle cells. What vessel can be characterized by these morphological features?

- A. Non-muscular vein
- B. Muscular artery
- C. Capillary
- D. Elastic artery
- E. Muscular vein

17. Following the treatment with anti-tuberculosis drugs, a 48-year-old woman developed optic nerve neuritis, memory impairment, and seizures. What anti-tuberculosis drug was she taking?

- A. Rifampicin
- B. Ethambutol
- C. Para-aminosalicylic acid (PAS)
- D. Isoniazid
- E. Kanamycin sulfate

18. During meiosis, various combinations of genes form in the gametes, which ensures the appearance of new traits in the offspring. What type of variability is it?

- A. Modificational variability
- B. Mutational variability
- C. Combinative variability
- D. Chromosomal variability
- E. Phenotypic (modificational) variability

19. A 64-year-old man has a 10-year-long history of ischemic heart disease and has been taking furosemide for a long time as a component of complex therapy for this disease. What drug should be prescribed to the patient to prevent the development of hypokalemia?

- A. Calcium bicarbonate
- B. Potassium permanganate
- C. Asparcam (potassium and magnesium aspartate)
- D. Potassium bromide
- E. Nitroglycerin

20. A puncture material obtained from myeloid tissue of a 6-year-old child contains cells with pyknosis and cellular enucleation that occur in the process of their differentiation. What type of hematopoiesis can be characterized by these morphological changes?

- A. Lymphopoiesis
- B. Thrombopoiesis
- C. Monopoiesis
- D. Erythropoiesis
- E. Granulopoiesis

21. As a result of an injury, the patient developed a dysfunction of the parotid salivary gland. What nerve ensures its secretion?

- A. *N. petrosus minor*
- B. *N. auricularis minor*
- C. *N. auricularis major*
- D. *N. petrosus major*
- E. *N. petrosus profundus*

22. A woman has been diagnosed with right-sided purulent parotitis. The doctor performed a surgery on the parotid gland, after which the patient noted asymmetry of her face and drooping of her upper eyelid and right angle of the mouth. What nerve has been damaged by the doctor in this case?

- A. *N. ulnaris*
- B. *N. maxillaris*
- C. *N. facialis*
- D. *N. hypoglossus*
- E. *N. axillaris*

23. A 37-year-old man has been diagnosed with dilation of the subcutaneous veins of the anterior thoracic and abdominal wall, intestinal bleeding, and splenomegaly. What pathological condition is observed in the patient?

- A. Portal hypertension syndrome
- B. Right ventricular failure
- C. Hypertensive syndrome
- D. Left ventricular failure
- E. Ascites

24. What anatomical structure in the nasal cavity contains the receptors of the olfactory analyzer?

- A. Choanae
- B. Middle nasal meatus
- C. Superior nasal meatus
- D. Common nasal meatus
- E. Inferior nasal meatus

25. Examination of the kidneys of a man, who died of uremia, revealed their atrophy, induration, and pale color. Congo Red staining of the microslides revealed red deposits in the glomeruli, vessel wall, stroma, and under the tubular epithelium. What pathological process was detected by the doctor in this case?

- A. Fibrinoid swelling
- B. Hyalinosis
- C. Obesity
- D. Sclerosis
- E. Amyloidosis

26. After removal of the parathyroid glands, a 43-year-old man developed complaints of lethargy, thirst, and a sharp increase in neuromuscular excitability. These symptoms are caused by disturbed metabolism of a certain substance. Name this substance.

- A. Chlorine
- B. Molybdenum
- C. Manganese
- D. Zinc
- E. Calcium

27. During a fire, a woman developed carbon monoxide poisoning. What hemoglobin compound will be detected in this patient?

- A. Carbohemoglobin
- B. Carboxyhemoglobin
- C. Methemoglobin
- D. Deoxyhemoglobin
- E. Oxyhemoglobin

28. During the examination of a 10-year-old child, a dentist detected numerous brown spots with a smooth surface and without enamel defects, located all over the surface of the dental crowns. What is the most likely dental pathology in this child?

- A. Enamel erosion
- B. Fluorosis
- C. Spot stage of caries
- D. Acid-induced necrosis of enamel
- E. Enamel hypoplasia

29. After one week of starvation, blood glucose of a person remains at a sufficient level, because of the activation of which process?

- A. Glycogenolysis
- B. Glycolysis
- C. Tricarboxylic acid cycle
- D. Gluconeogenesis
- E. Glycogen phosphorolysis

30. A 30-year-old woman diagnosed with systemic lupus erythematosus developed dry mouth. Histology of the biopsy material obtained from the salivary glands revealed signs of chronic sialadenitis with significant lymphocytic infiltration of the stroma and parenchymal atrophy with proliferation of the connective tissue. What pathological condition has developed in the patient?

- A. Sjogren's syndrome
- B. Acute serous sialadenitis
- C. Adenolymphoma
- D. Systemic scleroderma
- E. Acute purulent sialadenitis

31. A 10-year-old boy with marked hemorrhagic syndrome has no antihemophilic globulin A in his blood plasma. What mechanism of coagulation hemostasis is disturbed in this case?

- A. Fibrinolysis
- B. Activation of prothrombinase
- C. Conversion of fibrinogen to fibrin
- D. Blood clot retraction
- E. Conversion of prothrombin to thrombin

32. When motility of the large intestine is disturbed, the processes of protein decay increase, resulting in formation of toxic products, in particular phenol. From which amino acid does this organic compound form?

- A. Histidine
- B. Threonine
- C. Proline
- D. Tryptophan
- E. Tyrosine

33. During amniocentesis, fetal cells contained two sex chromatin bodies (Barr bodies). What disease can be characterized by this finding?

- A. Trisomy X
- B. Patau syndrome
- C. Turner syndrome
- D. Klinefelter syndrome
- E. Down syndrome

34. The patient's laboratory findings are as follows: leukocytes

—  $14 \cdot 10^9/L$ ; myeloblasts — 71%; promyelocytes, myelocytes, and metamyelocytes — 0%; band neutrophils — 6%, segmented neutrophils — 13%; lymphocytes — 7%; monocytes — 3%. What pathological condition has developed in the patient?

- A. Lymphoblastic leukemia
- B. Chronic myeloid leukemia
- C. Chronic lymphocytic leukemia
- D. Neutrophilic leukocytosis
- E. Myeloblastic leukemia

35. During examination, a 35-year-old woman was diagnosed with diffuse toxic goiter. What cells are hyperfunctional in this case, causing the disease?

- A. Parafollicular cells
- B. Parathyrocytes
- C. Endocrinocytes of the zona fasciculata of the adrenal cortex
- D. Thyrocytes
- E. Endocrinocytes of the zona glomerulosa of the adrenal cortex

36. After organ heterotransplantation, transplant rejection was detected. What cells cause this process?

- A. Macrophages
- B. Suppressor T cells
- C. Killer T cells
- D. B lymphocytes
- E. Helper T cells

37. No nitrogenous base that is a component of one DNA codon can be at the same time a component of another codon. What characteristic of the genetic code is it?

- A. Universality
- B. Non-overlapping
- C. Specificity
- D. Triplet structure
- E. Collinearity

38. At the molecular level, the process of spontaneous passive transport of water-soluble molecules across the cell membrane takes place in living organisms. The molecules move across the cell membrane from the area of a higher concentration towards the area of a lower concentration using specific transmembrane integral proteins. This type of transport does not directly require the chemical energy obtained in the process of ATP hydrolysis. Name this process.

- A. Endocytosis
- B. Pinocytosis
- C. Osmosis
- D. Active transport
- E. Facilitated diffusion

39. What hereditary disorders cause sickle cell anemia?

- A. Genomic mutation
- B. Crossing-over
- C. Disturbances of the mechanisms of genetic information transmission
- D. Transduction
- E. Gene mutation

40. A 13-year-old child has been diagnosed with tonsillitis and prescribed a combined sulfonamide drug with a bactericidal effect. What drug was prescribed to the child?

- A. Enteroseptol
- B. Aethazolum
- C. Biseptol (Co-trimoxazole)
- D. Sulfalene
- E. Urosulfanum

41. What anatomical structures are connected by the ductus arteriosus (ductus Botalli) during the intrauterine period of fetal development?

- A. Pulmonary trunk and superior vena cava
- B. Pulmonary trunk and aorta
- C. Aorta and inferior vena cava
- D. Right and left atrium
- E. Right and left ventricle

42. A patient has been hospitalized into the intensive care unit with the diagnosis of ketoacidotic coma. During examination, loud rapid breathing with deep inhalation and intensified exhalation is observed. What type of pathological breathing is it?

- A. Kussmaul breathing
- B. Cheyne-Stokes breathing
- C. Grocco breathing
- D. Apneic breathing
- E. Biot breathing

43. Autopsy of the body of a man revealed cavities in his lungs. The inner walls of the cavities consist of granulation tissue of varying degree of maturity. Marked pneumosclerosis and bronchiectasis are observed. Some of the cavities have areas of caseous necrosis. What pathological condition has developed in the patient?



- A. Bronchiectasis
- B. Infiltrative tuberculosis
- C. Acute cavernous tuberculosis
- D. Fibrocavitary tuberculosis
- E. Caseous pneumonia

44. What pathological condition is caused by the absolute deficiency of vitamin K in the body?

- A. Hypocoagulation
- B. Intestinal dysbiosis
- C. Disturbed platelet aggregation
- D. Hypercoagulation
- E. Disturbed platelet adhesion

45. In alkaptonuria, concentration of a certain acid increases in urine. Name this acid.

- A. Phenylpyruvic acid
- B. Homogentisic acid
- C. Pyruvic acid
- D. Uric acid
- E. Acetoacetic acid

46. A 50-year-old woman complains of constant thirst, high fluid intake, and increased diuresis. Laboratory testing detects blood glucose levels of 12 mmol/L. Glucose was detected in her urine. What endocrine organ is dysfunctional in this case?

- A. Parathyroid gland
- B. Pituitary gland
- C. Thyroid gland
- D. Pancreas
- E. Adrenal glands

47. What microbiological material must be obtained to confirm the diagnosis of recurrent epidemic typhus?

- A. Lavage from the nasopharynx
- B. Feces
- C. Blood
- D. Urine
- E. Cerebrospinal fluid

48. What test should the patient undergo to confirm the diagnosis of gonorrhea?

- A. Serological study
- B. Immobilization reaction
- C. Bacteriophage testing
- D. Hemagglutination reaction
- E. Microscopy of the pathological material

49. What type of cells is normally predominant in the epithelium of the crypts in the large intestine?

- A. Poorly differentiated cells
- B. Goblet cells
- C. Acidophilic granular cells
- D. Columnar villous epithelial cells
- E. Endocrinocytes

50. A man has been diagnosed with a subdural hematoma in the temporal region. What artery is damaged in this case?

- A. Anterior cerebral artery
- B. Middle cerebral artery
- C. Anterior meningeal artery
- D. Posterior communicating artery
- E. Middle meningeal artery