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								
4	5	4	1	1	0	9	9	5

Surname											
С	Т	Р	У	Т	И	Н	С	Б	К	К	Й

Variant 01

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.

Delving into dreams

Delving into dreams In 1896, after his father died, Freud had a series of disturbing dreams, which he wrote down and studied as he began his self-analysis. In one dream, he received a hospital bill for someone who had been in the family home 40 years earlier, before his own birth. In the dream, his father's ghost admitted to getting drunk and being detained. Freud believed the dream indicated there was something that his unconscious mind would not allow him to see in his father's past, such as a sexual abuse or other hidden vices. His relationship with his father had been difficult/ Freud told a friend, German physician Wilhelm Fliess, that his self-analysis and dreams had revealed a jealousy of his father and love for his mother - something he later described as an Oedipus complex, from the Greek myth of Oedipus, king of Thebes, who killed his father and unwittingly married his mother. In his landmark 1899 text, The Interpretation of Dreams, Freud outlined his theory that repressed emotions or urges (often of a sexual nature) are expressed or acted out in dreams and nightmares in a form of wish-fulfilment. Dreams, he considered, were the outlet of emotions too powerful and painful for the conscious mind to tolerate. He became increasingly convinced that it was traumatic events in childhood that led to mental health issues in adults, as such memories were invariably repressed. As patients could not explain or understand feelings or behaviour caused by factors outside their realm of consciousness, the only route to a cure lay in probing the unconscious, and dreams were a potent route to this unknown area.

1. Freud's theory emphasized that traumatic incidents during what period of life could lead to mental issues in adulthood?

A. Childhood
B. Middle age
C. Adolescence
D. Old age

2. Freud's relationship with his father could best be described as:

A. Nonexistent
B. Easygoing
C. Loving and supportive
D. Difficult and strained

3. What event led Freud to start his self-examination through dreams?

A. The birth of his first child
B. His marriage
C. The death of his father
D. A severe illness

4. Freud believed that dreams were a way of:

A. Fulfilling suppressed desires
B. Solving problems
C. Experiencing reality
D. Reliving past memories

5. Freud considered dreams to be:

A. Unrelated to any emotions
B. An escape from reality
C. A reflection of conscious thoughts
D. A gateway to understanding the unconscious

6. Freud identified a deep-seated feeling of rivalry with his father and affection for his mother, a concept later known as:

A. Psychosexual development
B. Dream analysis
C. Electra complex
D. Oedipus complex

7. According to Freud, what are dreams primarily an expression of?

A. Logical reasoning
B. Random thoughts
C. Subconscious wishes
D. Daily experiences

8. According to Freud, what was necessary to achieve a cure for mental health issues?

A. Hypnotic treatment
B. Ignoring childhood memories
C. Probing the unconscious mind
D. Medication

9. In Freud's dream, what was his father's ghost accused of?

A. Getting intoxicated and being held
B. Leaving the family
C. Inheriting money
D. Committing a crime

10. Choose the correct statement:

A. Freud's Interpretation of Dreams was published in 1889
B. Freud proposed that dreams were a way to act out repressed urges
C. Freud considered dreams as random and meaningless experiences
D. Freud believed dreams were unrelated to any psychological issues

II. Choose the right answer.

11. Karyotyping detected 47 chromosomes (3 copies of chromosome 13) in a newborn child with multiple defects of the skull, limbs, and internal organs. What syndrome can be characterized by such pathological changes?

A. Edwards syndrome
B. Turner syndrome
C. Down syndrome
D. Patau syndrome
E. Klinefelter syndrome

12. A patient has been hospitalized with an open fracture of the squamous part of the occipital bone and severe bleeding from the wound. What is the likely cause of the severe bleeding in this case?

A. Injury to the transverse venous sinus
B. Injury to the superior petrosal sinus
C. Injury to the sphenoparietal sinus
D. Injury to the cavernous sinus
E. Injury to the inferior petrosal sinus

13. A 9-year-old boy presents with delayed sexual development. What organ produces the male sex hormones that determine the development of the genitals before puberty?

A. Pituitary gland
B. Thymus
C. Testicles
D. Hypothalamus
E. Adrenal glands

14. After drinking sweet tea, blood levels of a certain hormone increase. Name this hormone.

A. Cortisol
B. Thyroxine
C. Glucagon
D. Insulin
E. Aldosterone

15. A 70-year-old man with arterial hypertension and concomitant benign prostatic hyperplasia needs to be prescribed an antihypertensive agent. What drug should be prescribed for him, taking into account the presence of the comorbid pathology?

A. Losartan
B. Lisinopril
C. Bisoprolol
D. Doxazosin
E. Amlodipine

16. A patient diagnosed with epidemic encephalitis presents with unilateral or bilateral ptosis (drooping eyelid), divergent strabismus, and impaired accommodation of the eye. The pupils are dilated. In this case, the nuclei of a certain pair of cranial nerves are damaged. Which pair of cranial nerves is it?

A. VII
B. VI
C. III
D. V
E. IV

17. Insufficient production of nitrogen monoxide (NO) causes hyperthermia, atherosclerosis, and impotence. What amino acid is used as a source, from which NO forms in the human body?

A. Glycine
B. Arginine
C. Valine
D. Proline
E. Leucine

18. A patient has been diagnosed with classical hemophilia A. What factor is deficient in this case, causing this pathology?

A. IX
B. I, II
C. V, X
D. XII
E. VIII

19. What process allows producing different mRNAs from a single primary transcript?

A. Polyadenylation
B. Limited proteolysis
C. Covalent modification
D. Alternative splicing
E. ADP-ribosylation

20. A newborn boy developed jaundice on his eighth hour of life. The boy's blood group is A(II) Rh(+), while the mother's blood group is 0(I) Rh(+). Laboratory studies reveal an elevated titer of the mother's anti-A antibodies, normal levels of glucose-6-phosphate dehydrogenase, and negative results of a sickle cell anemia test. The infant's serum hemoglobin is 106 g/L. What is the most likely cause of the infant's jaundice?

A. Hyperbilirubinemia
B. Sickle cell anemia
C. Rh incompatibility
D. Hypobilirubinemia
E. Glucose-6-phosphate dehydrogenase deficiency

21. A 25-year-old woman's blood test reveals elevated levels of human chorionic gonadotropin (hCG) that is a biochemical marker of pregnancy. What anatomical structure is the primary production site of this hormone?

A. Decidua
B. Granulosa cells in the ovaries
C. Theca folliculi
D. Uterine endometrium
E. Syncytiotrophoblast

22. A 50-year-old patient has been hospitalized with signs of a hypertensive crisis. What causes the acute increase in the blood pressure in this case?

A. Necrosis of arterioles
B. Endothelial dystrophy
C. Hyalinosis of arterioles
D. Endothelial desquamation
E. Spasm of arterioles

23. A man with complaints of a hoarse voice has undergone laryngoscopy that revealed a gray-white tumor on his right vocal cord. The tumor is seated on a wide peduncle and resembles a cauliflower. Microscopically, the biopsy material shows well-defined fibrovascular stroma, increased number of layers in the stratified squamous epithelium, no cellular atypia. What is the most likely diagnosis in this case?

A. Papilloma
B. Angioma
C. Fibroma
D. Angiofibroma
E. Polyp

24. After eating canned fish produced by an unknown manufacturer, a patient developed diplopia, dysphonia, and muscle rigidity. The doctor suspects botulism. What causes the development of the listed symptoms in the patient?

A. Stimulation of acetylcholine secretion
B. Inhibition of acetylcholine secretion
C. Inhibition of glycine secretion
D. Inhibition of GABA secretion
E. Stimulation of GABA secretion

25. During examination of a 57-year-old man, impaired circulation was detected in his left atrial myocardium. Where in the arteries has the circulatory disorder occurred in this case?

A. Right and left coronary arteries
B. Left coronary artery
C. Anterior interventricular branch of the left coronary artery
D. Right coronary artery
E. Posterior interventricular branch of the left coronary artery

26. For the treatment of megaloblastic anemia, the doctor prescribed a 13-year-old girl a medicine that stimulates the transition from megaloblastic to normoblastic type of hematopoiesis, takes part in the synthesis of purine and pyrimidine bases, and activates the synthesis of methionine and proteins. What has been prescribed for the patient?

A. Rose hips
B. Iron sulfate
C. Cyanocobalamin
D. Hemostimulin
E. Erythropoietin

27. A woman with menstrual irregularities came to a gynecologist who, during a vaginal examination, detected a bright red area on the vaginal part of the cervix around its external os. A biopsy sample was taken. Histologically, the biopsy material from this area exhibits proliferation of prismatic (columnar) epithelium with formation of glands. What

disease has been detected in the patient?

A. Healing endocervicosis
B. Cervical endometriosis
C. Adenocarcinoma
D. Proliferating endocervicosis
E. Simple endocervicosis

28. What compound is a central humoral factor that modulates the function of the immune system, intensifying the processes of cellular and humoral immunity?

A. Interleukin-5
B. Interleukin-2
C. Interleukin-7
D. Interleukin-8
E. Interleukin-3

29. Gamma-aminobutyric acid is the most important mediator of the central nervous system. This biogenic amine forms in the process of decarboxylation of a certain amino acid. Name this amino acid.

A. Glutamate
B. Lysine
C. Histidine
D. Tryptophan
E. Tyrosine

30. After the birth, the ductus Botalli that was connecting the pulmonary artery and the aorta in the embryonic period gradually obliterates and transforms into a ligament. Name this ligament.

A. *Lig. arteriosum*
B. *Lig. teres*
C. *Lig. denticulatum*
D. *Lig. flavum*
E. *Lig. venosum*

31. A patient has a temporal bone fracture. The fracture line passes through the internal auditory meatus, causing disruption of the blood supply to the inner ear. What artery is damaged in this case?

A. *A. labyrinthi*
B. *A. tympanica anterior*
C. *A. tympanica inferior*
D. *A. tympanica superior*
E. *A. tympanica posterior*

32. A 5-year-old child developed chills, a fever of 39°C, agitation, and vomiting. Nuchal rigidity was detected. On the third day after the onset, the child died. Autopsy of the body reveals thickened, dull, yellow-green pia mater. Microscopically, the pia mater was infiltrated by neutrophilic leukocytes with some lymphocytes and monocytes. What disease occurred in the child?

A. Purulent meningitis
B. Cerebral infarction
C. Hemorrhagic meningitis
D. Intracerebral hemorrhage
E. Ischemic encephalopathy

33. *S. aureus* can cause various infections — from purulent complications in wounds to pneumonia and sepsis. Why is penicillin therapy of staphylococcal infections not very effective?

A. Allergic response of the body to staphylococcal proteins
B. No penicillin receptors in the cell envelope of *S. aureus*
C. Penicillin's inability to penetrate the membrane of *S. aureus*
D. Acetylase production by *S. aureus*
E. Penicillinase production by *S. aureus*

34. A 26-year-old man has been diagnosed with anemia against the background of chronic gastritis with deficiency of the intrinsic Castle factor. What type of anemia is most likely in this patient?

A. Thalassemia
B. Iron deficiency anemia
C. Chronic posthemorrhagic anemia
D. B_{12} and folate deficiency anemia
E. Hypoplastic anemia

35. The incretory function of the kidneys is impaired in a patient with chronic glomerulonephritis. What blood components are deficient in this case?

A. Leukocytes
B. Platelets
C. Erythrocytes and leukocytes
D. Leukocytes and platelets
E. Erythrocytes

36. In a histological specimen, a student identifies a parenchymal organ that contains numerous round structures of various sizes. Their wall is formed by a single layer of cuboidal epithelial cells. Inside, the structures contain a homogeneous acellular mass that stains pink with eosin. What organ is it?

A. Thymus
B. Ovary
C. Thyroid gland
D. Parathyroid gland
E. Adrenal gland

37. It was established that overstretching of the cardiac atria results in decreased sodium reabsorption in the distal convoluted tubule and increasd glomerular filtration rate. What hormone most likely causes such physiological changes in the body?

A. Angiotensin
B. Vasopressin
C. Renin
D. Aldosterone
E. Natriuretic peptide

38. After partial gastric resection, the patient developed anemia. This pathology is caused by the insufficient function of certain cells in the gastric mucosa. Name these cells.

A. Mucous neck cells
B. Stem cells
C. Enteroendocrine cells
D. Gastric chief exocrine cells
E. Parietal exocrine cells

39. During the last 2 days, the patient was experiencing mild shortness of breath that has intensified over the last few hours, with the patient developing cyanosis of the lips and fingertips. Examination results: respiratory rate — 30/min, heart rate — 105/min, blood pressure — 130/80 mm Hg, PaO_2 — 55 mm Hg, arterial blood pH — 7.36. What pathogenetic type of hypoxia is most likely in this case?

A. Histotoxic hypoxia
B. Exertional hypoxia
C. Hemic hypoxia
D. Respiratory hypoxia
E. Circulatory hypoxia

40. A 48-year-old woman has been diagnosed with Raynaud syndrome and prescribed an adrenotropic agent. What group does this drug belong to?

A. β_2-Blockers
B. α/β-Adrenergic agonists
C. α-Blockers
D. β_1-Blockers
E. β_1-Adrenergic agonists

41. A 57-year-old woman has been prescribed an angiotensin-converting enzyme inhibitor that undergoes no metabolic transformations in the body and is used to treat arterial hypertension against the background of diabetic nephropathy. What drug has been prescribed for this patient?

A. Spironolactone
B. Captopril
C. Enalapril
D. Lisinopril
E. Ramipril

42. In an experiment, the axons of the neurosecretory cells of the supraoptic nucleus of the hypothalamus have been severed in the test animal. As a result, the accumulation of a certain hormone will become impaired in the pituitary gland. Name this hormone.

A. Somatotropin
B. Adrenocorticotropin
C. Prolactin
D. Vasopressin
E. Lipotropin

43. During examination of a newborn, the doctor diagnosed the baby with congenital muscular torticollis. What neck muscle is affected in this case?

A. *M. sternocleidomastoideus*
B. *M. mylohyoideus*
C. *M. platysma*
D. *M. sternohyoideus*
E. *M. omohyoideus*

44. During the autopsy of the body of a 58-year-old woman with diabetes mellitus, histology of the kidneys reveals segmented, homogeneous, oxyphilic deposits in the glomeruli. The walls of the arterioles were diffusely thickened, homogeneous, and oxyphilic. What pathological condition has developed in the renal glomeruli and blood vessels?

A. Mucoid swelling
B. Fibrinoid swelling
C. Amyloidosis
D. Hyalinosis
E. Hyaline-droplet dystrophy

45. Pathologies of lipid metabolism include sphingolipidoses that can be characterized by the accumulation of excess phospholipids and sphingolipids, mainly in the nervous tissue. What disease is associated with accumulation of GM2 ganglioside in the body?

A. Tay-Sachs disease
B. Niemann-Pick disease
C. Krabbe disease
D. Gaucher disease
E. Fabry disease

46. Two days after the knee surgery, a 56-year-old patient developed dyspnea, acrocyanosis, tachycardia, low blood pressure, and dizziness. His medical history informs that he has been diagnosed with diabetes mellitus two years ago. What is the cause of the detected disorders?

A. Vascular insufficiency
B. Type 2 diabetes mellitus
C. Localized intravascular coagulation syndrome
D. Congenital pathology of the lungs
E. Thrombophilic syndrome

47. A 19-year-old girl with recurrent sinusitis has undergone several courses of treatment with different antibiotics. During one such treatment, she developed severe diarrhea, causing her hospitalization. The results of the tests allowed diagnosing her with pseudomembranous colitis. What drug, administered orally, would be most effective in treating colitis caused by *Clostridium difficile*?

A. Clindamycin
B. Ampicillin
C. Tetracycline
D. Cefazolin
E. Metronidazole

48. In a certain section of a chromosome, the genes were arranged in the following sequence: abcdef. Due to a mutagenic factor, a rearrangement occurred in this section, causing the following sequence of the chromosomes: abedcf. What type of mutation has occurred in this case?

A. Deletion
B. Nonreciprocal translocation
C. Inversion
D. Reciprocal translocation
E. Duplication

49. During an accident on a nuclear submarine, a soldier received a radiation dose of 5 Gy. He complains of headache, nausea, and dizziness. What changes in his leukocyte count can be expected after such a radiation exposure?

A. Lymphocytosis
B. Leukopenia
C. Anemia
D. Agranulocytosis
E. Neutrophilic leukocytosis

50. A man has been diagnosed with a hereditary disease that manifests as extreme flexibility of the joints in the arms and scoliosis. The patient presents with an aortic aneurysm and mitral valve insufficiency. The gene responsible for the development of this disease causes disorders of the connective tissue development and anomalies of the cardiovascular system. What type of gene interaction manifests in this case?

A. Complementarity
B. Polymery
C. Pleiotropy
D. Recessive epistasis
E. Dominant epistasis