



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 32

TEST ITEMS
FOR THE UNIFIED STATE QUALIFICATION EXAM
TEST COMPONENT
STAGE 1

STOMATOLOGY

ENGLISH LANGUAGE PROFICIENCY TEST

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

Mucocutaneous infection results in oropharyngeal (thrush) or vaginal or cervical candidiasis; intertriginous lesions of the gluteal folds; paronychia; and onychia. Dysfunction of T lymphocytes, other immunologic disorders are associated with chronic mucocutaneous candidiasis. Chronic or recurrent oral candidiasis can be the presenting sign of HIV infection or primary immunodeficiency. Esophageal and laryngeal candidiasis can occur in patients who are immunocompromised. Disseminated or invasive candidiasis occurs in very low birth weight neonates and, in immunocompromised or debilitated hosts, can involve virtually any organ or anatomic site and be rapidly fatal. Like other *Candida* species, *C. albicans* is present on skin and in the mouth, intestinal tract, and vagina of immunocompetent people. Vulvovaginal candidiasis is associated with pregnancy, and newborns can acquire the organism in utero, during passage through the vagina, or postnatally. Person-to-person transmission occurs rarely. Factors such as extreme prematurity, neutropenia, or treatment with corticosteroids increase the risk of invasive infection. Patients receiving broad-spectrum antimicrobial agents, especially extended-spectrum cephalosporins, carbapenems, and vancomycin have increased susceptibility to infection. Postsurgical patients can be at risk, particularly after cardiothoracic or abdominal procedures. The presumptive diagnosis of mucocutaneous candidiasis or thrush can usually be made clinically, but other organisms or trauma can also cause clinically similar lesions. Yeast cells and pseudohyphae can be found in *C. albicans*-infected tissue and are identifiable by microscopic examination of scrapings. A definitive diagnosis of invasive candidiasis requires isolation of the organism from a normally sterile body site (eg, blood, cerebrospinal fluid, bone marrow) or demonstration of organisms in a tissue biopsy specimen.

1. Choose the correct statement.

- A. Pregnant women often have candidiasis
- B. Candidiasis cannot happen in pregnant women
- C. The onset of vulvovaginal candidiasis happens during the passage of the new-born through the vagina
- D. Newborns often give candidiasis to their mothers

2. What factors increase the risk of getting candidiasis?

- A. Cytotoxic chemotherapy and asthma
- B. Allergy and neutropenia
- C. Treatment with corticosteroids and NSAIDs
- D. Prematurity, neutropenia, or treatment with corticosteroids

3. How can a definitive diagnosis of invasive candidiasis be made?

- A. Clinically
- B. By finding *Candida* in the tissue that is normally sterile
- C. Microscopically
- D. By performing endoscopy

4. Oral candidiasis is always a symptom of HIV infection.

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

5. What patients have a higher risk of getting infected with candidiasis?

- A. Patients who are taking any drugs
- B. Patients who underwent surgery
- C. Patients who had contact with the infected person
- D. Patients who stay in the hospital

6. Choose the correct statement.

- A. Candidiasis – is always the symptom of more serious illness
- B. Candidiasis occurs only in neonates
- C. In some cases, candidiasis can lead to death
- D. Candidiasis itself is not dangerous

7. The patients in the ICU have a high possibility of developing candidiasis.

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

8. Choose the correct statement.

- A. People who suffer from candidiasis often infect other people
- B. People who suffer from candidiasis never infect other people
- C. People who suffer from candidiasis can't infect other people
- D. Getting infected from contact with an infected person is not very common

9. Candidiasis can indicate a problem with the immune system

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

10. Candidiasis affects only mucous membranes of the body.

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

II. Choose the right answer.

11. Histology of the diaphysis of a tubular bone shows basophilic cells with developed organelles of synthesis located on its surface under a layer of fibers. These cells take part in regeneration of bone tissue. In what layer of the diaphysis are they located?

- A. Layer of osteons
- B. Layer of external general lamellae
- C. Layer of internal general lamellae
- D. Periosteum
- E. Bone proper

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

- A. D_3
- B. E
- C. K
- D. PP
- E. A

13. Biochemical analysis of amino acid composition of freshly synthesized polypeptides shows that in the process of translation, in each of these proteins the first amino acid is always the same one. Name this amino acid.

- A. Phenylalanine
- B. Serine
- C. Isoleucine
- D. Histidine
- E. Methionine

14. A patient has arterial hypertension with signs of angina pectoris. The patient has been prescribed an antianginal drug that is a calcium antagonist. Name this drug.

- A. Molsidomine
- B. Anaprilin (Propranolol)
- C. Metoprolol
- D. Amlodipine
- E. Pentoxifylline

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

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

16. The patient's blood has a C-reactive protein that chemically can be classified as a glycoprotein. What pathology does it indicate?

- A. Anemia
- B. Porphyria
- C. Rheumatism
- D. Leucopenia
- E. Thrombocytopenia

17. The patient's leukogram is 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 is the patient's blood pathology?

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

18. Examination of the oral cavity shows marked edema and hyperemia of the gums, supragingival and subgingival calculus, and formation of pocket-

like cavities filled with structureless masses and food debris in the area of the dentogingival junction. These pockets produce purulent discharge, when pressed. X-ray shows resorption of the bone tissue in the tooth sockets. What is the diagnosis in this case?

- A. Periodontitis
- B. Fluorosis
- C. Periodontosis
- D. Acute purulent periostitis
- E. Hypertrophic gingivitis

19. As a result of the blockage of the common bile duct (detected radiologically), the flow of bile into the duodenum has stopped. What process can be expected to become disturbed in this case?

- A. Absorption of proteins
- B. Inhibition of salivary secretion
- C. Hydrolysis of carbohydrates
- D. Emulsification of lipids
- E. Hydrochloric acid secretion in the stomach

20. A baby has microcephaly. Doctors believe that this condition is caused by the baby's mother taking actinomycin D during her pregnancy. What germ layers have been affected by this teratogen?

- A. Endoderm
- B. Mesoderm
- C. Ectoderm
- D. All the germ layers
- E. Endoderm and mesoderm

21. In histogenesis of bone tissue, two ways of its development are possible. What stages are not characteristic of membranous osteogenesis?

- A. Formation of reticulofibrous bone
- B. Formation of osteogenic buds within mesenchyme
- C. Osteoid stage
- D. Formation of epiphyseal centers of ossification
- E. Replacement of reticulofibrous bone tissue with lamellar bone tissue

22. After a facial injury, the patient has a hematoma on the cheek. What salivary gland is likely to have its outflow blocked by this hematoma?

- A. Parotid
- B. Submandibular
- C. Labial
- D. Sublingual
- E. Buccal

23. What is caused by an absolute deficiency of vitamin K in the body?

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

24. A patient, who has overdosed on a narcotic substance, is unconscious and has hypothermia, hypotension, and persistent miosis. What aid would be most effective and ensure the patient's survival in this case?

- A. Aethimizolum (Methylamide)
- B. Naloxone
- C. Omeprazole
- D. Nitrazepam
- E. Mesaton (Phenylephrine)

25. Name the change in the nucleotide sequence of a gene that is associated with the rotation of a certain DNA segment by 180° .

- A. Deletion
- B. Duplication
- C. Repair
- D. Inversion
- E. Translocation

26. An 11-month-old child has delayed teething, misaligned teeth, dry oral mucosa, and cracks appearing in the corners of the mouth with subsequent suppuration. This condition is likely to be associated with a deficiency of vitamin:

- A. E
- B. K
- C. A
- D. D
- E. C

27. A 38-year-old woman has developed a bronchial asthma attack. What broncholytic that is a β_2 -adrenergic agonist would be effective for providing emergency aid in this case?

- A. Adrenaline
- B. Salbutamol
- C. Ipratropium bromide
- D. Atropine
- E. Platyphyllinum

28. During a selection for revaccination with the BCG vaccine, a schoolboy has undergone the Mantoux test that turned out to be negative. What does this test result indicate?

- A. Absence of humoral immunity to tuberculosis
- B. Absence of antitoxic immunity to tuberculosis
- C. Absence of cellular immunity to tuberculosis
- D. Presence of cellular immunity to tuberculosis
- E. Presence of humoral immunity to tuberculosis

29. During the examination of a

pregnant woman, a dentist detected 3 round formations on her oral mucosa. The formations appeared 3 days ago. They have a white-gray surface with a red rim and are up to 1 cm in diameter. What is the diagnosis in this case?

- A. Catarrhal stomatitis
- B. Aphthous stomatitis
- C. Gangrenous stomatitis
- D. Necrotizing ulcerative stomatitis
- E. Leukoplakia

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

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

31. Experimental studies of membrane ionic currents in the dynamics of action potential development have shown that the ionic current that causes the repolarization phase can be classified as:

- A. Passive potassium current
- B. Active potassium current
- C. Passive sodium current
- D. Active sodium current
- E. Active chlorine current

32. Name the sequence of special functional DNA segments and structural genes that encode synthesis of a certain group of proteins that belong to one metabolic series.

- A. Operon
- B. Promoter
- C. Terminator
- D. Regulator gene
- E. Operator

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

34. A hospitalized person has severe headache, nuchal rigidity, recurrent vomiting, and increased sensitivity to light stimuli. The patient has been diagnosed with meningitis and referred for a spinal tap. Where is the needle inserted for a spinal tap?

- A. Between L1 and L2 vertebrae
- B. Between L5 vertebra and the base of the sacrum
- C. Between L3 and L4 vertebrae
- D. Between Th11 and Th12 vertebrae
- E. Between Th12 and L1 vertebrae

35. A 10-day-old baby has undergone a surgery for cleft upper lip («hare lip»). A split upper lip is caused by:

- A. A non-union of the second branchial arch
- B. A non-union of the third branchial arch
- C. A non-union of the frontal and maxillary processes of the first branchial arch
- D. A non-union of the maxillary and mandibular processes of the first branchial arch
- E. A non-union of the tori palatini on the maxillary processes of the first branchial arch

36. A patient complains of an extremely runny nose and lost sense of smell. Where in the nasal cavity are located the receptors of the olfactory analyzer?

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

37. When extracting a tooth, the dentist destroys the bonds between the cementum of the dental root and the tooth socket. What structure is it?

- A. *Dentinum*
- B. *Gingiva*
- C. *Cementum*
- D. *Periodontium*
- E. *Pulpa dentis*

38. The parents of a newborn came for medical and genetic counseling. Their baby is suspected to have Edwards syndrome that manifests as micrognathia, microstomia, and a short upper lip. What testing methods are necessary to clarify the diagnosis?

- A. Dermatoglyphics
- B. Immunogenetics
- C. Cytogenetics
- D. Biochemistry
- E. Clinical genealogy

39. A patient, who was taking a highly effective anti-tuberculosis drug, has developed gynecomastia at the end of the treatment course. What drug has caused this side effect?

- A. Ethambutol
- B. Rifampicin
- C. Florimycin sulfate (Viomycin sulfate)
- D. Ciprofloxacin
- E. Isoniazid

40. Preventive examination of a 9-year-old girl has revealed one matte white spot (chalk-like and lacking its natural luster) on the enamel in the cervical region on the vestibular surface of her tooth 21. The girl has no subjective complaints. What is the most likely diagnosis in this case?

- A. Enamel hypoplasia
- B. Superficial caries
- C. Initial caries
- D. Dental erosion
- E. Fluorosis

41. The most important thing in the specific treatment of anaerobic infections is the timely administration of the serum that contains specific antibodies. In this case, the serum aims to neutralize:

- A. Enterotoxin
- B. Antitoxin
- C. Toxoid
- D. Exotoxin
- E. Anaerobic bacteria

42. A patient has been hospitalized into the intensive care unit in a severe condition. It is known that he mistakenly took sodium fluoride that blocks cytochrome oxidase. What type of hypoxia has developed in the patient?

- A. Hemic hypoxia
- B. Cardiovascular hypoxia
- C. Respiratory hypoxia
- D. Tissue hypoxia
- E. Hypoxic hypoxia

43. For early detection of a pregnancy, a urinalysis is performed. What hormone is likely to indicate pregnancy, if it is present in the woman's urine?

- A. Testosterone
- B. Estriol
- C. Progesterone
- D. Aldosterone
- E. Chorionic gonadotropin

44. A patient with a malignant tumor has been prescribed a narcotic analgesic for pain relief. What is the mechanism of analgesic action of such drugs?

- A. Inhibition of cholinergic receptors
- B. Activation of opiate receptors
- C. Activation of D2 dopamine receptors
- D. Inhibition of serotonergic receptors
- E. Inhibition of histaminergic receptors

45. In the peripheral zone of the pulp, the cell activity is temporarily inhibited for certain reasons. What dental tissue is at risk of developing a deficiency of its physiological regeneration in this case?

- A. Dentin
- B. Acellular cementum
- C. Enamel
- D. Pulp
- E. Cellular cementum

46. A 45-year-old woman with hypoparathyroidism came to a dentist. What renal function is likely to be impaired in this patient?

- A. Increase of prostaglandin synthesis
- B. Reduction of calcium reabsorption in the distal tubules
- C. Reduction of vitamin B6 synthesis
- D. Reduction of calcium filtration in the renal glomeruli
- E. Increase of urokinase synthesis

47. For caries prevention, dentists recommend limiting the intake of simple carbohydrates. What is the role of a cariogenic diet in the pathogenesis of defects of hard dental tissues?

- A. Disorders of calcium and phosphorus metabolism
- B. Saturation of dental enamel with fluorine
- C. Activation of remineralization process
- D. Formation of chelating substances
- E. Decrease of pH in the oral cavity

48. Due to the presence of a

malignant tumor on the tongue, the patient has been referred for its surgical removal. Where is it easy to find the lingual artery and ligate it?

- A. Omoclavicular triangle
- B. Pirogov triangle
- C. Omotracheal triangle
- D. Carotid triangle
- E. Omotrapezoid triangle

49. Salivary α -amylase catalyzes the hydrolysis of α -1,4-glycosidic bonds of starch. What ions function as its activators?

- A. Sodium ions
- B. Potassium ions
- C. Zinc ions
- D. Lead ions
- E. Copper ions

50. Hyposalivation, observed in sialolithiasis, and both acute and chronic inflammations of the salivary glands, causes the development of:

- A. Stomatitis
- B. Gingivitis
- C. Fluorosis
- D. Pulpitis
- E. Caries