1. Дефіцит якого фактора згортання крові спричиняє захворювання гемофілію В?
a. VII
b. VIII
c. IX
d. V
e. XI

2. A 36-year-old man developed angina pectoris attacks after a case of staphylococcal sepsis. In the left coronary artery, coronary angiography revealed parietal thrombosis without signs of atherosclerosis. In this case, the thrombus formation started because of the damage to the vascular endothelium and the release of:
a. Adenosine diphosphate
b. Serotonin
c. Phospholipase A2
d. Adenosine triphosphate
e. Platelet-activating factor

3. A patient complains of drooping eyelid (ptosis) that appeared recently. What nerve is affected in this case?
a. Trochlear
b. Optic
c. Ophthalmic
d. Oculomotor
e. Abducens

4. Blood testing of a patient with jaundice revealed an increase in total bilirubin due to its indirect fraction. Patient's urine and feces have a saturated color. What is the most likely mechanism of these disorders?
a. Impaired bile outflow from the liver
b. Damaged liver parenchyma
c. Increased hemolysis of erythrocytes
d. Disturbed urobilinogen conversion in the liver
e. Disturbed formation of direct bilirubin

5. У п`ятирічної дитини зі спадковим ураженням нирок під час огляду виявлено ознаки рахіту, в лабораторних показниках концентрація вітаміну D в нормі. Яка найімовірніша причина розвитку рахіту?
a. Недостатність кальцію в їжі
b. Порушення синтезу кальцитріолу
c. Підвищена екскреція кальцію
d. Гіперфункція паращитовидних залоз
e. Гіпофункція паращитовидних залоз

6. A woman came to a medical and genetic consultancy requesting to assess the risk of hemophilia in her children. Her husband has hemophilia. History-taking revealed that the woman's family had no cases of hemophilia. What is the risk of this couple giving birth to a child with this disease?
a. 75%
b. 100%
c. Absent
d. 25%
e. 50%

7. In Tay-Sachs amaurotic idiocy that has an autosomal recessive pattern of inheritance, irreversible severe disorders of the central nervous system develop, leading to death in early childhood. In this disease, disturbed metabolism of certain substances is observed. Name these substances.
a. Carbohydrates
b. Lipids
c. Amino acids

d. Minerals
e. Nucleic acids

8. In the hematology unit a patient with leukemia was prescribed 5-Fluorouracil. What is the mechanism of action of this drug?
a. Catalyzes replication
b. Inhibits transcription
c. Inhibits translation
d. Inhibits DNA synthesis
e. Stimulates DNase

9. A 7-week-old infant is brought to the pediatrician due to feeding difficulty for the last 4 days. She has been drinking very little breast milk and stops feeding as if she is tired, only to start sucking again after a few minutes. On chest auscultation, bilateral wheezing is present. A cardiac murmur starts immediately after the onset of the first heart sound (S1), reaching its maximal intensity at the end of systole, and waning during late diastole. The murmur is best heard over the second intercostal space and radiates to the left clavicle. The first heart sound (S1) is normal, while the second heart sound (S2) is obscured by the murmur. The pediatrician suspects a patent ductus arteriosus. Communication between which of the following arteries is the most likely cause of hemodynamic instability?
a. Pulmonary artery and pulmonary veins
b. Pulmonary artery and aorta
c. Aorta and pulmonary veins
d. Superior vena cava and aorta
e. Superior vena cava and pulmonary artery

10. A patient diagnosed with chronic bronchitis underwent a biopsy of the main bronchus. The patient has a 30-year-long history of smoking. Histology of the biopsy material revealed stratified squamous epithelium. What pathological process in the main bronchus does it indicate?
a. Physiological regeneration
b. Dysplasia
c. Metaplasia
d. Hyperplasia
e. Reparative regeneration

11. Під час мікроскопічного дослідження: клітини овальної форми, розміром 150 мкм, цитоплазма з включеннями жовтка, але не виявлено центріолей. Укажіть цю клітину.
a. Макрофаг
b. Овоцит
c. Лейкоцит
d. Фібробласт
e. Міоцит

12. Під час мікроскопічного дослідження препарату, виготовленного з периферійної ділянки легені, виявлено поперечний переріз трубчастого утворення, стінка якого складається зі слизової та адвентиційної оболонок. Поверхня слизової оболонки має численні складки, а м’язова пластинка утворена суцільним шаром гладких міоцитів. Який це елемент повітроносних шляхів?
a. Середній бронх
b. Термінальна бронхіола
c. Малий бронх
d. Великий бронх
e. Альвеолярний хід

13. During the treatment of ciliary arrhythmia, a patient developed bronchoobstructive syndrome --- problematic breathing and cough. What antiarrhythmic drug can cause such a complication?
a. Ajmaline
b. Novocainamide (Procainamide)
c. Verapamil

d. Anaprilin (Propranolol)
e. Nifedipine

14. In cases of fatty infiltration of the liver, the synthesis of phospholipids becomes disrupted. In such cases, the patients are advised to eat more cottage cheese, because it contains a certain substance that can promote the methylation process in the synthesis of phospholipids. Name this substance.
a. Calcium
b. Methionine
c. Glycerine
d. Cysteine
e. Ethanolamine

15. After 10 days of treatment with an antibiotic, a patient developed signs of dysbosis: dyspepsia, candidiasis, jaundice, and photosensitization, which indicates that this antibiotic belongs to the following group:
a. Rifampicin group
b. Cephalosporin group
c. Penicillin group
d. Tetracycline group
e. Aminoglycoside group

16. When stimulation frequency of an isolated heart of a rabbit increases, incomplete relaxation of the ventricles of the heart can be observed because of:
a. Increased potassium levels in the interstitium
b. Increased potassium levels in cardiomyocytes
c. Inhibition of the sodium–potassium pump
d. Increased sodium levels in cardiomyocytes
e. Accumulation of calcium in cardiomyocytes

17. A 59-year-old man, a business manager, developed intense burning retrosternal pain with irradiation into the left arm. The pain occurred in the evening after the tax audit. 15 minutes later the patient's condition normalized. What mechanism of angina pectoris development is leading in this patient?
a. Coronary artery thrombosis
b. Increased level of blood \\ catecholamines
c. Coronary atherosclerosis
d. Functional cardiac overload
e. Intravascular aggregation of blood cells

18. During an exam, the student's absolute pain threshold is higher than when the student is at rest. What system activates in the body, causing this phenomenon?
a. Parasympathetic nervous system
b. Pituitary-adrenal system
c. Sympathetic nervous system
d. Sympathoadrenal system
e. Antinociceptive system

19. A mother of a 4-month-old male infant brought him to pediatrician with complaints of food rejection and weight loss. He started having trouble latching onto his bottle. He has also become extremely lethargic. Examination reveals diminished muscle tone in all four limbs, and hepatosplenomegaly. An ophthalmoscopic exam reveals macular cherry red spots. During the next few weeks, hepatosplenomegaly progresses, the boy fails to thrive, and he continues to reject food. Chest X-ray shows a reticulonodular pattern and calcified nodules. Biopsy of the liver shows foamy histiocytes. A Niemann-Pick disease is suspected. Which of the following is the most likely deficient enzyme in this patient?
a. Sphingomyelinase
b. Phenylalanine-hydroxylase
c. Galactocerebrosidase

d. Glucocerebrosidase
e. Glucose-6-phosphatase

20. In course of an experiment there has been an increase in the nerve conduction velocity. This may be caused by an increase in the concentration of the following ions that are present in the solution around the cell:
a. Na^+
b. K^+ and Cl^-
c. Ca^{2+} and Cl^-
d. K^+ and Na^+
e. Ca^{2+}

21. Чоловік віком 38 років скаржиться на швидку стомлюваність, у положенні стоячи із закритими очима він похитується, втрачає рівновагу. Тонус скелетних м'язів знижений. Яка з нижченаведених структур мозку, найбільш імовірно, вражена у пацієнта?
a. Прецентральна звивина кори великих півкуль
b. Базальні ганглії
c. Мозочок
d. Гіпоталамус
e. Таламус

22. Histology of the red bone marrow biopsy material detected cells of the granulocytic series. What changes occur in the nucleus during the differentiation of these cells?
a. Pyknosis
b. Enlargement
c. Polyploidization
d. Segmentation
e. Enucleation

23. Gastroscopy has detected a tumor-like formation 1.5 cm in diameter, attached to a pedicle, in the area of the lesser curvature. What is the character of the tumor growth in this case?
a. Exophytic
b. Infiltrating
c. Appositional
d. Expansive
e. Endophytic

24. A 64-year-old man presents with a tremor in his legs and arms. He says he has had the tremor for <<many years>>, but it has worsened in the last year. The tremor is more prominent at rest and nearly disappears on movement. His daughter mentions that his movements have become slower. The patient is afebrile and vital signs are within normal limits. On physical examination, the patient is hunched over and his face is expressionless throughout examination. There is a <<pill-rolling>> resting tremor that is accentuated when the patient is asked to clench the contralateral hand and alleviated by finger-nose testing. When asked to walk across the room, the patient has difficulty taking the first step, has a stooped posture and takes short rapid shuffling steps. A doctor initiates pharmacotherapy and the drug of first line, levodopa, is prescribed. Which of the following is the most likely mechanism of action of this drug?
a. Stimulation of dopamine production
b. Cholinesterase inhibition
c. ---
d. Activation of M2-cholinergic receptors
e. Inhibition of M2-cholinergic receptors

25. Який із нижченаведених препаратів під час закрапування в очі викликає розширення зіниці та параліч акомодації?
a. Фурацилін
b. Атропіну сульфату
c. Галантаміну гідробромід

d. Пілокарпіну гідрохлориду
e. Прозерін

26. In the body of a 37-year-old woman, who died with signs of pulmonary edema, there was detected an acute deformation of the aortic valve: it is shortened, thickened, ulcerated, has areas of stone-like density. On its external surface there are large, up to 2 cm in diameter, thrombotic plaques. The left ventricle wall is 2.2 cm thick. The cardiac muscle is dull, matt, and flaccid. What type of endocarditis corresponds with the described changes in the aortic valve?

a. Acute verrucous endocarditis
b. Diffuse endocarditis
c. Fibroplastic endocarditis
d. Recurrent verrucous endocarditis
e. Ulcerative polypoid endocarditis

27. A patient is diagnosed with acute morphine hydrochloride intoxication. Prescribe an oxidizing agent for gastric lavage:

a. Chlorhexidine (bi)gluconate
b. Cerigel
c. Chloramine
d. Sulfocamphocainum (Procaine + Sulfocamphoric acid)
e. Potassium permanganate

28. A patient needs to be prescribed a wide-spectrum fluoroquinolone agent. Select this drug from the list.

a. Azlocillin
b. Amoxicillin
c. Ciprofloxacin
d. Carbenicillin
e. Chinoxydin

29. An 11-year-old girl is brought to the doctor's office by her mother who states her daughter has been weak with swollen face for 3 days. The mother states her daughter had always been healthy and active until the initiation of symptoms. Upon inquiry, the girl describes a foamy appearance of her urine but denies blood in urine, urinary frequency at night, or pain during urination. Physical examination reveals generalized swelling of the face and pitting edema on the lower limbs. Laboratory study shows proteinuria and microscopic hematuria. Which of the following is the most likely cause of findings in the laboratory study of urine?

a. Increased permeability across the glomerular capillary wall
b. Increased plasma oncotic pressure
c. ---
d. Increased hydrostatic pressure in Bowman's capsule
e. Increased glomerular hydrostatic pressure

30. A 37-year-old woman presents to the emergency department complaining of palpitations, dry cough, and shortness of breath. She is a nonsmoker. Her blood pressure 100/65 mm Hg, pulse --- 76/min., respiratory rate --- 23/min. Her physical exam is significant for bibasilar lung crackles and a low-pitched, mid-diastolic rumbling murmur best heard at the apical region without radiation. She has jugular vein distention and bilateral pitting edema in her lower extremities. Despite considerable efforts in the emergency department, she dies from sudden cardiac death at night. The family requests an autopsy to determine her cause of death. The patient's heart shows a mitral stenosis. Histologic examination reveals increased connective tissue in the myocardium and Ashoff-Talalaev's granulomas. Which of the following is the most likely diagnosis?

a. Rheumatic heart disease
b. Dermatomyositis
c. Systemic scleroderma
d. Polyarteritis nodosa
e. Systemic lupus erythematosus

31. A 24-year-old man undergoes surgery and during the operation, an organ is excised and sent for histological evaluation. A light microscopic examination reveals the organ encased by thin connective tissue capsule that enters the substance of the lobes to further subdivide the organ into irregular lobular units. Each lobule contains a cluster of follicles filled with colloid. Follicular epithelium consists of low columnar, cuboidal or squamous cells depending on the level of activity of the follicle. Which of the following organs does this tissue most likely belong to?

a. Parathyroid gland
b. Thymus
c. Pancreas
d. Parotid gland
e. Thyroid gland

32. The patient's ECG shows that the ST segment is displaced above the isoelectric line by 1 mm and the T wave duration is increased to 0.25 seconds. What process is disturbed in the patient, causing these changes on the ECG?

a. Atrial repolarization
b. Atrial depolarization
c. Ventricular depolarization
d. Ventricular repolarization
e. Atrioventricular conduction

33. A worker was hospitalized with the bleeding, caused by an injury to the shoulder. Five days later, an increased concentration of certain blood cells will be observed in the patient's blood. Name these cells.

a. Reticulocytes
b. Megaloblasts
c. Lymphoblasts
d. Erythroblasts
e. Megalocytes

34. Brain MRI shows a local dilation (aneurysm) of an artery in the lateral sulcus. What vessel has pathological changes in this case?

a. A. communicans posterior
b. A) cerebri posterior
c. A) cerebri media
d. A) cerebri anterior
e. A. communicans anterior

35. A 48-year-old woman has been diagnosed with Raynaud syndrome (a spasm of peripheral blood vessels) and prescribed an adrenotropic agent. What group does this drug belong to?

a. Alpha/beta-adrenergic agonists
b. Alpha-blockers
c. Beta-1-adrenergic agonists
d. Beta-2-blockers
e. Beta-1-blockers

36. A mutation has occurred in a cell in the first exon of the structural gene. The number of nucleotide pairs changed from 290 to 250. Name this type of mutation:

a. Deletion
b. Translocation
c. Nullisomy
d. Inversion
e. Duplication

37. One of the tunics of a hollow organ contains nucleated anastomosing fibers. The fibers consist of cells that form intercalated discs in the contact areas. What tissue forms this tunic of an organ?

a. Dense irregular connective tissue
b. Cross-striated cardiac muscle

c. Loose fibrous connective tissue
d. Cross-striated skeletal muscle
e. Smooth muscle

38. A 50-year-old man presents to the office with the complaint of pain in his left great toe. The pain started 2 days ago and has been progressively getting worse to the point that it is difficult to walk even a few steps. He adds that his left big toe is swollen and hot to the touch. He normally drinks 2--3 glasses of red wine each day. Physical examination is notable for an overweight gentleman (BMI of 35) in moderate pain, with an erythematous, swollen, and exquisitely tender left great toe. A complete blood count shows: hemoglobin --- 120 g/L, hematocrit --- 0.45, platelets --- $160 · 10^9$/L, leukocytes --- $8.0 · 10^9$/L, segmented neutrophils --- 65%, lymphocytes --- 25%, eosinophils --- 3%, and monocytes --- 7%. Synovial fluid analysis shows cell count of 15,000 cells/mm³ (80% neutrophils), negatively birefringent crystals present. Elevated concentration of which of the following compounds is the most common laboratory finding in these patients?

a. Uric acid
b. Cystine
c. Urea
d. Bilirubin
e. Cholesterol

39. A 42-year-old man died of acute anemia due to pulmonary hemorrhage. An irregularly-shaped round cavity 5--6 cm in size was detected in the second segment of the right lung. The cavity communicates with the bronchial lumen. The inner surface of the cavity is uneven and covered with a flabby, structureless, yellowish tissue. Its wall is thin and consists of compacted lung tissue with inflammatory alterations. Histology shows that the inner layer of the cavity consists of molten caseous masses with a large number of segmented leukocytes. What is indicated by the changes detected in the lungs of the deceased man?

a. Disintegrating pulmonary carcinoma
b. Lung abscess
c. Pulmonary infarction with septic disintegration
d. Bronchoectatic cavern
e. Acute cavernous tuberculosis

40. Examination shows that the patient's sternocleidomastoid muscle and the upper edge of the trapezius muscle suffer from atrophy. Turning the head into the opposite direction is problematic. What nerve is affected in this case?

a. Intercostal nerve
b. Vagus nerve
c. Brachial plexus
d. Hypoglossal nerve
e. Accessory nerve

41. The plasma cell produces specific antibodies against a certain antigen. When the antigen is introduced into the body, the number of plasma cells increases. What blood cells increase in number in this case, resulting in increased total number of plasma cells?

a. B lymphocytes
b. Basophils
c. Eosinophils
d. Monocytes
e. T lymphocytes

42. A 33-year-old woman has hepatocerebral dystrophy (Wilson's disease). Ceruloplasmin levels in her blood are decreased. Amino acid levels are sharply increased in her urine. These changes are primarily caused by the intensification of the following process:

a. Urea synthesis
b. Gluconeogenesis
c. Formation of copper complexes with amino acids
d. Reamination of amino acids

e. Breakdown of tissue proteins

43. RNA of human immunodeficiency virus (HIV) has penetrated the leukocyte and stimulated the cell to synthesize viral DNA using the revertase enzyme. Name this process:
a. Operon depression
b. Convariant replication
c. Reverse transcription
d. Reverse translation
e. Operon repression

44. A man has an impairment of a certain part of his central nervous system, which manifests as asthenia, muscle dystonia, and a balance disorder. What part of the central nervous system is affected in this case?
a. Red nuclei
b. Reticular formation
c. Vestibular nuclei
d. Substantia nigra
e. Cerebellum

45. The tonsils of a 4-year-old child are enlarged, hyperemic, and covered with non-removable whitish membranes. What type of inflammation characterizes the changes in the child's tonsils?
a. Fibrinous inflammation (croupous)
b. Purulent inflammation
c. Caseous necrosis
d. Fibrinoid necrosis
e. Fibrinous inflammation (diphtheritic)

46. Echo-planar imaging is a technique that uses gamma rays for MRI scans.
a. -
b. True
c. False
d. Not given
e. -

47. During examination the patient is found to have low production of adrenocorticotropic hormone. How would this affect production of the other hormones?
a. ---
b. Increase thyroid hormones \\ synthesis
c. Decrease hormone synthesis in the adrenal medulla
d. Increase sex hormones synthesis
e. Decrease insulin synthesis

48. Autopsy of the body of a 40-year-old man, who died of odontogenic sepsis, revealed sharp thickening of poorly mobile semilunar aortic valves. The tissue of the valve is whitish and opaque. Its outer surface has thrombotic deposits 1x1.5 cm in size. What type of endocarditis is it?
a. Diffuse endocarditis
b. Acute verrucous endocarditis
c. Recurrent verrucous endocarditis
d. Fibroplastic endocarditis
e. Ulcerative polypoid endocarditis

49. A 35-year-old woman complains of pain in her joints and numbness of her fingers and toes. During examination, a doctor notes that the patient's face is amimic and has thickened skin. Biopsy of a cutaneomuscular flap was performed for this patient. Histology detects disorganization of dermal connective tissue, mucoid and fibrinoid swelling, weak cellular response, and foci of gross sclerosis and hyalinosis. Atrophy of integumental structures, sclerosis of vascular intima, and perivascular bulbar sclerosis are observed in the patient. Make the diagnosis.
a. Systemic scleroderma
b. Polyarteritis nodosa

c. Rheumatoid arthritis
d. Systemic lupus erythematosus.
e. Rheumatism

50. Яка група організмів має нуклеоїди - кільцеві молекули ДНК, що формують хромосоми простої будови (відсутні гістони)?
a. Гриби
b. Віруси
c. Бактеріофаги
d. Найпростіші
e. Бактерії

51. Oxidation of carbohydrates and lipids produces a large amount of energy, the main portion of which is generated in the process of acetyl-CoA oxidation. How many ATP molecules are formed as a result of complete oxidation of one acetyl-CoA molecule?
a. 24
b. 12
c. 38
d. 8
e. 36

52. In some diseases of the nervous system, damage with chromatolysis phenomena can be observed in the neurocytes. What intracellular metabolic processes become disturbed in the neurons?
a. Synthesis of carbohydrates
b. Keratohyalin folding
c. Synthesis of protein
d. Synthesis of glycolipids
e. Synthesis of lipids

53. A patient with type 1 diabetes mellitus has been prescribed insulin as a substitution therapy. What is the mechanism of action of this drug?
a. COX-2 inhibition
b. Increase of the glucose permeability of cell plasma membranes
c. Stimulation of α-cells of pancreatic islets
d. Blockade of H1-histamine receptors
e. Intensification of anaerobic glycolysis

54. The key reaction of fatty acid synthesis is production of malonyl-CoA) What metabolite is the source of malonyl-CoA synthesis?
a. Acyl-CoA
b. Malonate
c. Succinyl-CoA
d. Citrate
e. Acetyl-CoA

55. A 55-year-old woman has mitral valve insufficiency and had myocarditis 10 years ago. Currently she has no complaints. Her hemodynamics is within the normal range. What general nosology concept corresponds with this situation?
a. Pathological process
b. Pathological reaction
c. Pathological condition
d. Typical pathological process
e. Compensatory reaction

56. A patient with pleurisy has a foul-smelling fluid, containing biogenic amines and gases, in the pleural cavity. What type of inflammation is observed in this case?
a. Putrefactive
b. Catarrhal
c. Fibrinous

d. Purulent
e. Alterative

57. In an experiment, despiralization of the DNA molecule was disrupted in an animal cell. What processes will primarily stop occurring in this cell?
a. Repair
b. Termination
c. Transcription
d. Processing
e. Translation

58. A 42-year-old man with verified HIV infection developed a fever, generalized lymphadenopathy, diarrhea, and slight weight loss. What period of HIV infection corresponds with these symptoms?
a. Incubation period
b. AIDS-related complex
c. HIV encephalomyelitis
d. Period of acquired immunodeficiency syndrome
e. Period of persistent generalized lymphadenopathy

59. A group of researchers aimed to study cardiac physiology found that overstretching of atria in the heart leads to decreased sodium reabsorption in the distal convoluted tubule and increase in glomerular filtration rate. Which of the following is the most likely cause of physiologic effects discovered by researchers?
a. Aldosterone
b. Renin
c. Angiotensin
d. Natriuretic peptide
e. Antidiuretic hormone

60. A blood smear of an allergic person contains a large number of round cells with a segmented nucleus and large bright pink granules in the cytoplasm. Name these blood cells.
a. Erythrocytes
b. Lymphocytes
c. Neutrophilic granulocytes
d. Basophilic granulocytes
e. Eosinophilic granulocytes

61. A 16-year-old girl has no hair on the pubis and in the armpits, her mammary glands are underdeveloped, she has no menstruations. What hormone imbalance is the likely cause of these symptoms?
a. Medulloadrenal hyperfunction
b. Hyperthyroidism
c. Ovarian failure
d. Hyperfunction of pancreatic islet apparatus
e. Hypothyroidism

62. Elevated blood homocysteine is a risk factor for cardiovascular pathology. This amino acid is formed in the body from:
a. Cystine
b. Methionine
c. Cysteine
d. Alanine
e. Folic acid

63. A 37-year old female presents to the clinic complaining of severe pain in her left wrist and tingling sensation in her left thumb, index finger, and middle finger, and some part of her ring finger. The pain started as an occasional throb and she could ignore it or take ibuprofen but now the pain is much worse and wakes her up at night. She works as a typist and her pain mostly increases after typing all day. Her right wrist and fingers are fine. Nerve conduction studies reveal nerve compression. Which of

the following nerves is most likely compressed in this patient?

a. Radial nerve
b. Ulnar nerve
c. Musculocutaneous nerve
d. Axillary nerve
e. Median nerve

64. After bilateral adrenalectomy performed on a dog, the animal developed muscle weakness, adynamia, low body temperature, and hypoglycemia. What other sign is likely to be observed in case of adrenal insufficiency?

a. Increased resistance to bacteria and toxins
b. Increased sodium and chloride levels in the blood serum
c. Arterial hypotension
d. Increased glycogen synthesis
e. Lymphopenia

65. After delivery of a child by pregnant woman, the midwife notices a defect in external genitalia of a newborn. The woman only had one prenatal ultrasound that reported a male fetus. On physical exam, the neonatologists notices a short, broad penis with an orifice in its dorsal aspect, both testicles are present in the scrotum. Which of the following is the most likely congenital abnormality?

a. Paraphimosis
b. Hypospadias
c. Epispadias
d. Phimosis
e. Ovotesticular disorder of sex development

66. Під час аутопсії тіла чоловіка віком 47 років виявили виразку по задній стінці шлунка діаметром 3 см, яка проникає у прилеглу до кишки тканину підшлункової залози. У ділянці виразки у підшлунковій залозі та в оточуючій жировій тканині множинні стеатонекрози. Яке ускладнення виразкової хвороби виникло у чоловіка?

a. Перфорація
b. Пенетрація
c. Малігнізація
d. Флегмона стінки шлунка
e. Стеноз

67. A 43-year-old man seeks evaluation at an emergency department with complaints of fever with chills, malaise, diffuse abdominal pain for over a week, diarrhea and loss of appetite. He says that his symptoms are progressively getting worse. He recalls that the fever began slowly and climbed its way up stepwise to the current 39.8°C) His blood pressure is 110/70 mm Hg. A physical exam reveals a coated tongue, enlarged spleen and rose spots on the abdomen. Serologic study shows the agglutinin O titre of 1:200 by the Widal test. Which of the following is the most likely causative organism for this patient's condition?

a. Mycobacterium tuberculosis
b. Salmonella typhi
c. Vibrio cholerae
d. Leptospira interrogans
e. Enterohemorrhagic E) coli

68. In a patient with diabetes mellitus, regeneration processes are reduced and wounds do not heal for a long time. What metabolic changes cause this condition in the patient?

a. Acidosis
b. Inhibition of protein synthesis
c. Reduced glucose supply to the cells
d. Lipid metabolism disorder
e. Accumulation of ketone bodies

69. Because of a cerebral hemorrhage, a patient developed impaired speech perception (sensory

aphasia). What brain structure is likely to be damaged in this case?

a. Superior temporal gyrus
b. Inferior frontal gyrus
c. Postcentral gyrus
d. Inferior temporal gyrus
e. Superior frontal gyrus

70. Transcription is the reaction of mRNA matrix synthesis on DNA matrix. Name the stages of transcription.

a. Initiation, elongation, termination
b. Initiation, elongation, translation
c. Initiation, translation, elongation
d. Initiation, processing, splicing
e. Processing, splicing, termination

71. At the post-mortem examination the stomach of a patient with renal failure was found to have a yellow-brown coating on the thickened mucosa. The coating was firmly adhering to its surface and had significant thickness. Microscopy revealed congestion and necrosis of mucosal and submucosal layers, fibrin presence. What is the most likely diagnosis?

a. Corrosive gastritis
b. Esogastritis
c. Gastric abscess
d. Croupous gastritis
e. Fibrinous gastritis