Microbiology tests (200)

1.The kingdom of eukaryotes includes:

A. protozoa and

 fungi

B. bacteria and plants

C. bacteria and mycoplasma

D. bacteria and viruses

2. What are bacteria with a bundle of flagella at one end called?

A. monotrichs

B. lophotrichus

C. peritrichous

D. amphitrichs

3. What microorganisms have a spindle shape?

A. clostridia

B. bacteria

C. spirilla

D. pneumococci

4. How are respiratory diseases transmitted?

A. aerogenic

B. nutritional

C. through insects

D. through objects

5. What type of arrangement of flagella is characteristic of Vibrio cholerae?

A. lophotrichus

B. monotrichs

C. amphitrichs

D. atriches

6. Meningococci in a smear are located in the form...:

A. diplococci

B. micrococci

C. chains (beads)

D. in the form of grape bunches

7. The organs of movement in bacteria are:

A. flagella

B. cilia

C. villi

D. fimbriae

8. The founder of microbiology as an independent science was…:

A. Antony Leeuwenhoek

B. Robert Koch

C. Edward Jenner

D. Louis Pasteur

9. The founder of the science of viruses was:

A. D. Ivanovsky

B. S. Vinogradsky

S. V. Pidvisotsky

D. L. Gromashevsky

10. Staphylococci in a smear are located in the form of:

A. two cells each

B. in clusters, like a grape

C. resemble chains (beads)

D. tetracocci (four each)

11. The typical "tennis racket" appearance is characteristic of spores:

A. C. botulinum

B. C. perfringens

C. C. tetani

D. C. Histolyticum

12. Mechanism of infection for typhoid fever and paratyphoid fever:

A. airborne.

B. fecal-oral.

C. contact.

D. transmission.

13. The main virulence factor of pneumococci:

A. capsule

B. hyaluronidase

C. endotoxin

D. exotoxin

14. After filtering 1 liter of water, 2 gray and 3 red colonies grew on the filter. What is the coli titer and coli index?

A. 200 and 5

B. 500 and 2

C. 250 and 4

D. 333 and 3

15. In which sexually transmitted diseases is the ulcer not painful?

A. chancroid.

B. genital herpes.

C. syphilis.

D. with all of the above, the ulcer is painful

16. In what diseases is bacteremia observed?

A. typhoid fever.

B. urinary tract infection.

C. diphtheria.

D. staphylococcal sepsis.

17. When diagnosing sepsis in a laboratory, they sow:

A. blood

B. liquor

C. wound contents

D. nasal wash

18. Rickettsia occupy an intermediate position between:

A. bacteria and fungi

B. bacteria and spirilla

C. bacteria and actinomycetes

D. bacteria and viruses

19. Staphylococci are stained using the method:

A. Gram

B. Neisser

C. Burri-Gins

D. Ziehl-Neelsen.

20. Streptococci in a smear are located in the form of:

A. single cells

B. tetracocci (four each)

C. shaped like grapes

D. resemble chains (beads)

21. Streptococci are stained using the method

A. Gram

B. Ozheshko

C. Leffler

D. Burri-Ginsa

22. Specify the bacteria that most often cause ascending urinary tract infections

A. Escherichia coli

B. Citrobacter freundii

C. Serratia marcescens

D. Klebsiella pneumoniae

23. Indicate the source of the causative agent of tetanus in nature:

A. dairy products

B. predatory animals

C. soil

D. herbivores

24. Indicate the ways of transmission of gonorrhea:

A. sexual and household

B. pin

C. sexual

D. household and vertical

25. The shape of a coffee bean (bean) is

A. meningococci and gonococci

B. sarcina and micrococci

C. pentacocci and pentastreptococci

D. staphylococci and streptococci

26. What color are gonococci stained by Gram?

A. gram-negative, blue

B. gram-negative, red

C. gram-positive, green

D. gram-positive, black

27. What serological reaction can be used to determine soluble antigens

A. precipitation reactions

B. agglutination reactions

C. hemagglutination reactions

D. immobilization reactions

28. Name the serological reaction in which the hemosystem is used:

A. flocculation reaction

B. agglutination reaction

C. complement fixation reaction

D. precipitation reaction

29. What does a chemical vaccine consist of?

A. from soluble antigen

B. from flagella

C. from peptidoglycan

D. from lipids

30.Which of the following reactions does not involve antibodies?

A. AR(Direct, Indirect)

B. IFA

C. Rapid plasma regain(RP)

D. Hemagglutination reaction

 31. Select a spiral-shaped microorganism

A. L. interrogans

B. S. aureus

C. E. coli

D. S. typhi

32.Bacilli include:

A. convoluted bacteria

B. bacteria that form spores

C. bacteria that have flagella

D. bacteria that form capsules

33.What type of allergen is pollen?

A. inhalation

B. contact

C. household

D. injection

34. The founder of the II (morphological period) in the history of microbiology was:

A. Ilya Mechnikov

B. Louis Paster

C. Antoni Leeuwenhock

D. Robert Koch

35. Clostridium botulinum under anaerobic conditions produces:

A. botulinum toxin

B. myelotoxin

C. endotoxin

D. histotoxin

36. Ig A takes part in:

A. Neutralize bacteria

B. complement fixation

C. antitumor immunity

D. local immunity

37. What color are bacterial capsules painted when stained using the Burri-Gins method?

A. black color

B. colorless

C. blue color

D. purple color

38. What color are acid-fast bacteria painted using the Ziehl–Neelsen method?

A. red

B. blue

C. yellow

D. colorless

39. What color are bacteria not resistant to acids painted using the Ziehl-Neelsen method?

A. red

B. purple

C. blue

D. colorless

40. What material is used in the diagnosis of sepsis:

A. blood

B. liquor

C. nasopharyngeal lavage

D. wound contents

41. What toxin is produced by the vegetative form of the tetanus pathogen?

A. histotoxin

B. exotoxin

C. enterotoxin

D. necrotoxin

42. Blood smears with bacteremia are colored:

A. according to Gram

B. according to Ziehl-Neelsen

C. blood smears are not usually done

D. according to Leffler

43. Mechanism of infection for typhoid fever and paratyphoid fever:

A. fecal-oral

B. contact

C. airborne

D. transmission

44. The main virulence factor of pneumococci:

A. hyaluronidase

B. endotoxin

C. capsule

D. exotoxin

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B. diphtheria

C. staphylococcal sepsis

D. typhoid fever

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B. liquor

C. wound contents

D. nasal flush

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B. bacteria and viruses

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D. bacteria and actinomycetes

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B. Citrobacter freundii

C. Serratia marcescens

D. Klebsiella pneumoniae

51. Indicate the source of the causative agent of tetanus in nature:

A. herbivores

B. dairy products

C. carnivores

D. soil

52. Indicate the maximum time for delivery of stool in a preservative to the bacteriological laboratory:

A. 16 hours

B. 2 hours

C. 6 hours

D. 12 hours

53. Specify the ways of transmission of gonorrhea:

A. contact

B. sexual and household

C. household

D. vertical(placenta)

54. The shape of a coffee bean (bean) is:

A. sarcina and micrococci

B. pentacocci and pentastreptococci

C. meningococci and gonococci

D. staphylococci and streptococci

55. Bacteria multiply in:

A. geometric progression

B. randomly, chaotically

C. physical progression

D. arithmetic progression

56. Biological identification is carried out:

A. infection of animals

B. agglutination reaction

C. biochemical reactions

D. cultivation on nutrient media

57. In what media are the proteolytic properties of bacteria determined?

A. MPG, coagulated whey, with pieces of chicken egg white, milk

B. yolk-salt whey, MPA(mead pepton agar), with pieces of chicken egg white, water

C. environment Endo, Ploskireva, Levin

D. curdled whey, milk. water, Levin's medium

58. In the body of humans and animals, capsules are formed by pathogens:

A. tetanus and botulism

B. diphtheria and cholera

C. dysentery and whooping cough

D. plague and anthrax

59. The main role in the pathogenesis of tetanus is played by:

A. tetanohistotoxin and lethal toxin

B. tetanospasmin and tetanolysin

C. tetanohemolysin and lecithinase

D. tetanonecrotoxin and hyaluronidase

60. What animals cause the source of rabies to circulate in nature?

A. cats

B. cattle

C. bats

D. wild animals

61. During their evolution, bacteria acquired various ways of obtaining energy:

A. fermentation, respiration, photosynthesis

B. fermentation, respiration, polyembryony

C. division, photosynthesis, metabolism

D. anabolism, catabolism and nutrition

62. Disputes persist in the external environment:

A. several hours

B. several months

C. for a month

D. over several years and decades

63.After an infectious disease, the pathogen remains in the body for several years. What is this infection called?

A. persistent

B. latent

C. slow

D. reinfection

64.Where does T-lymphocyte differentiation occur in the human body?

A. in the bone marrow

B. in the thymus

C. in the central nervous system

D. in the spleen

65. Which cells of the body participate in three-cell cooperation during antibody genesis?

A. macrophage, T-lymphocyte, B-lymphocyte

B. T-suppressor, B-lymphocyte, T-killer

C. K-killer, macrophage, neutrophil

D. fibroblast, macrophage, T-lymphocyte

66.What serological reaction can be used to determine soluble antigens

A. agglutination reactions

B. hemagglutination reactions

C. immobilization reactions

D. precipitation reactions

67. The composition of flagella includes protein:

A. flagelin

B. keratin

C. fibrinogen

D. lecithin

68. The causative agent of cholera is:

A. V. parahaemolyticus

B. V. aldinolyticus

C. V. cholerae

D. pyloridis

69. Currency grains are identified by staining using the following method:

A. Neisser

B. Burri-Ginsa

C. Gramma

D. Ozheshko

70.Select obligate anaerobes:

A. Clostridium tetani, Clostridium botulinum

B. Escherichia coli, Clostridium botulinum

C. Salmonella typhi, Clostridium tetani

D. Brucella melitensis, Clostridium tetani

71.Select properties characteristic of salmonella:

A. gram-positive

B. form spores

C. spiral

D. peritrichous

72.Name the serological reaction in which the hemosystem is used:

A. flocculation reaction

B. complement fixation reaction

C. agglutination reaction

D. precipitation reaction

73.What does a chemical vaccine consist of?

A. from flagella

B. from soluble antigen

C. from peptidoglycan

D. from lipids

74.Which of the following reactions does not involve antibodies?

A. HAR(Hemagglutination Reaction)

B. Passive AR

C. Immun ferment Reaction

D. Passive hemagglitination reaction

75.Which class of immunoglobulins first appears in the blood after antigen administration?

A. IgM

B.IgG

C.IgD

D.Ig E

76.Which cells are the first to come into contact with antigens?

A. macrophages

B. T helper cells

C. T lymphocytes

D. B lymphocytes

77.What toxin is produced by the vegetative form of the tetanus pathogen?

A. histotoxin

B. exotoxin

C. enterotoxin

D. necrotoxin

78. Mechanism of transmission of intestinal infections:

A. fecal-oral

B. contact

C. airborne

D. transmission

79. Acquired immunity, which forms after the administration of immune serum, is called:

A. congenital

B. natural active

C. natural passive

D. artificial passive

80.Which cells of the immune system produce antibodies?

A. B lymphocytes

B. macrophages

C. plasma cells

D. T lymphocytes

81. The typical appearance of a “tennis racket” is characteristic of disputes:

A. C. botulinum

B. perfringens

C. tetani

D. histolyticum

82. Specify the causative agent of tularemia:

A. melitensis

B. suis

C. abortus

D. tularensis

83. Specify the causative agent of plague:

A. Y. pestis

B. Y. enterocolitica

C. B. pertussis

D. E. coli

84.What is the chemical nature of gelatin?

A. polysaccharide

B. lipid

C. protein

D. carbohydrate

85.Bacteria have:

A. haploid set of chromosomes

B. diploid set of chromosomes

C. RNA in plasmids

D. mitochondria

86. Sterilize in the flame of a gas burner:

A. petri dishes

B. volumetric pipettes

C. Pasteur tubes

D. bacteriological loops

87. Incomplete antibodies differ from normal immunoglobulins by a certain property. Which one?

A. the level of antibodies in the blood

B. the presence of one active center

C. amino acid composition

D. the structure of the active center

88. By what criterion in the complement fixation reaction is the correspondence of antibodies to the antigen determined?

A. draft

B. precipitate

C. appearance of flakes

D. hemolysis

89.What percentage of peripheral blood is T-lymphocytes normally?

A. 60-70%

B. 19-20%

C. 25-30%

D. 35-40%

90. System that performs the transport function in the immune system

A. blood

B. thymus

C. spleen

D. lymph node

91.The organ in which the first stage of interaction of antigen with immunocytes occurs?

A. lymph node

B. thymus

C. bone marrow

D. blood

92. Lymphocytes, including B-lymphocytes in proliferation and differentiation:

A. T-effectors

B. T helper cells

C. T-suppressors

D. T-differentiating cells

93. Surface structures of immunocytes designed to recognize antigens to implement an immune response:

A. receptors

B. villi

C. polysaccharides

D. markers

94. Surface structures of immunocytes, allowing cells to be typed and differentiated from each other:

A. villi

B. polysaccharides

C. receptors

D. markers

95. Substances that carry signs of genetic foreignness and, when introduced into the body, cause the development of immunological reactions:

A. proteins

B. antigens

C. polysaccharides

D. nucleoproteins

96. Antigens capable of causing an immune response of the body and specifically reacting with the corresponding immunocytes and immunoglobulins

A. full antigens

B. proteins

C. polysaccharides

D. Nucleoproteins

97. Antigens capable of causing an immune response of the body only after conjugation with large-molecular carrier substances

A. proteins

B. haptens

C. polysaccharides

D. soluble antigens

98.Viruses contain all components except:

A. controversy

B. RNA

C. DNA

D. supercapsid

99. The causative agent of cholera was discovered by:

A. Ilya Mechnikov

B. Louis Pasteur

C. Robert Koch

D. Edward Jenner

100.Select biological catalysts:

A. enzymes

B. amines

C. toxins

D. polymers

101.Choose a spiral-like microorganism

A. L. interrogans

B. S. aureus

C. E. coli

D. S. typhi

102.Bacilli include:

A. convoluted bacteria

B. rod-shaped bacteria

C. bacteria that have flagella

D. bacteria that form capsules

103.What type of allergen is pollen?

A. inhalation

B. contact

C. household

D. injection

104.The founder of the II (morphological period) in the history of microbiology was:

A. Antoni Leeuwenhock

B. Ilya Mechnikov

C. Louis Paster

D. Robert Koch

105.What nitrogen base is used to distinguish bacterial cell RNA from DNA?

A. adenine

B. uracil

C. guanine

D. cytosine

106.Clostridium botulinum under anaerobic conditions produces:

A. botulinum toxin

B. myelotoxin

C. endotoxin

D. histotoxin

107.Ig A takes part in:

A. local immunity

B. neutralization of bacteria

C. complement fixation

D. antitumor immunity

108.Leptospira interrogans causes in humans:

A. leprosy

B. leginellosis

C. leptospirosis

D. listeriosis

109.Bacilli differ from clostridia:

A. size of flagella

B. absence of fimbriae

C. by the presence of inclusions

D. spore size

110.Bacilli differ from bacteria in their ability to form:

A. controversy

B. capsules

C. flagella

D. volutin grains

111. Select strict anaerobes:

A. E. coli

B. S. typhi

C. S. aureus

D. C. tetani

112. Gram-negative bacteria are stained:

A. red

B. purple

C. blue

D. black

113. Gram-positive bacteria are:

A. staphylococci

B. gonococci

C. salmonella

D. shigella

114. What material is used to diagnose sepsis:

A. cerebrospinal fluid

B. nasopharyngeal swab

C. blood

D. wound contents

115. What toxin does the vegetative form of the tetanus pathogen produce?

A. exotoxin

B. histotoxin

C. enterotoxin

D. necrotoxin

116. The mechanism of infection in typhoid fever and paratyphoid fever:

A. alimentary

B. fecal-oral

C. airborne

D. transmissible.

117.What is sterilized by pasteurization?

A. milk, beer, wine

B. glassware

C. liquid medium and liquids that contain proteins

D. surgical instruments, syringes, needles

118.Name the types of interaction between a macroorganism and a microorganism:

A. bacteremia

B. bacterial carriage

C. infection

D. superinfection

119. Specify the source of the tetanus pathogen in nature:

A. herbivorous animals

B. dairy products

C. predatory animals

D. soil

120. Specify the maximum time for delivery of feces in a preservative to a bacteriological laboratory:

A. 12 hours

B. 16 hours

C. 2 hours

D. 6 hours

121. Which subpopulations of T-lymphocytes participate in the secondary immune response?

A. Immunological memory T-cells

B. T-helpers

C. T-effectors

D. T-suppressors

122. Where are microbial antigens mainly localized?

A. in ribosomes

B. in the cytoplasm

C. in volutin

D. in the cell wall

123. Specify the immunological reaction that determines the exotoxin of the diphtheria pathogen:

A. agglutination

B. precipitation

C. hemagglutination

D. complement fixation

124. Specify the author of the theory of humoral immunity

A. Mechnikoff I.I.

B. Erlich P.

C. Minkh A.V.

D. Chistovich F.Ya.

125. The reason for weak post-infection immunity in staphylococcal infection:

A. antigenic mimicry

B. weak virulence

C. absence of pathogenicity enzymes

D. sensitivity to a specific phage

126. Corpuscular antigens:

A. microorganisms

B. erythrocytes

C. leukocytes

D. tissue cells

127. The ability of antigens to create immunity:

A. specificity

B. antigenicity

C. immunogenicity

D. foreignness

128. The ability of antigens to differ in the structure of their molecule from the structure of a similar substance in the body:

A. foreignness

B. specificity

C. immunogenicity

D. antigenicity

129. The property of antigens by which they differ from each other:

A. immunogenicity

B. specificity

C. antigenicity

D. foreignness

130. Antigenic specificity by which antigens are divided into serovars

A. typical

B. cellular

C. pathological

D. organ

131. Antigenic specificity, by which one animal species differs from another species:

A. typical

B. species

C. pathological

D. functional

132. Bacteria reproduce in:

A. geometric progression

B. randomly, chaotically

C. physical progression

D. arithmetic progression

133. Biological identification is carried out:

A. by infecting animals

B. by agglutination reaction

C. by biochemical reactions

D. by culturing on nutrient media

134. How do you become infected with botulism?

A. By contact with a sick person

B. By eating infected dry-cured sausage, canned food

C. By drinking infected water

D. By eating infected salads from fresh vegetables

135. In what media are the proteolytic properties of bacteria determined?

A. Endo, Ploskirev, Levin medium

B. MPE, coagulated whey, with pieces of chicken egg white, milk

C. Yolk-salt whey, MPA, with pieces of chicken egg white, water

D. coagulated whey, milk, water, Levin medium

136. In the body of humans and animals, capsules are formed by the pathogens of:

A. tetanus and botulism

B. diphtheria and cholera

C. dysentery and whooping cough

D. plague and anthrax

137. In the pathogenesis of tetanus, the main role is played by:

A. tetanospasmin and tetanolysin

B. tetanohistotoxin and lethal toxin

C. tetanohemolysin and lecithinase

D. tetanonecrotoxin and hyaluronidase

138. Due to which animals in nature does the source of rabies circulate?

A. cats

B. wild animals

C. cattle

D. bats

139. What organelles are absent in the microbial cell?

A. mitochondria and centrosomes

B. flagella and spores

C. cytoplasmic membrane

D. mesosomes and ribosomes

140. During their evolution, bacteria acquired various ways of obtaining energy:

A. fermentation, respiration, photosynthesis

B. fermentation, respiration, polyembryony

C. division, photosynthesis, metabolism

D. anabolism, catabolism and nutrition

141. In the external environment, spores persist:

A. for several hours

B. for several years and decades

C. for several months

D. for a month

142. After an infectious disease, the pathogen remains in the body for several years. What is this infection called?

A. persistent

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A. macrophage, T-lymphocyte, B-lymphocyte

B. T-suppressor, B-lymphocyte, K-killer

C. K-killer, macrophage, neutrophil

D. fibroblast, macrophage, T-lymphocyte

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B. precipitation reaction

C. hemagglutination reaction

D. immobilization reaction

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147. What does a chemical vaccine consist of?

A. soluble antigen

B. flagella

C. peptide glycan

D. lipids

148. Which of the listed reactions does not involve antibodies

A. HAR(Hemagglutination Reaction)

B. Passive AR

C. Immun ferment Reaction

D. Passive hemagglitination reaction

149. Which class of immunoglobulins appears first in the blood after the introduction of an antigen?

A. Ig G

B. Ig D

C. IgM

D. Ig E

150. Which cells are the first to come into contact with antigens?

A. Macrophages

B. T-helpers

C. T-lymphocytes

D. B-lymphocytes

151. What functions does the cytoplasmic membrane perform:

A. Antigenicity carrier.

B. Ensuring the penetration of nutrients and the release of metabolic products.

C. Protection from phagocytosis.

D. Hereditary trait.

D. Preservation of the shape of the bacterium.

152. Acid resistance is revealed by staining:

A. Leffler

B. Gram.

V. Neisser.

G. Ziehl-Nielsen..

D. Romanovsky-Giemsa.

153. What function does the cell wall of microbes perform:

A. Maintains the constancy of shape.

B. Participates in protein synthesis.

C. Participates in carbohydrate synthesis.

D. Participates in respiration.

D. Regulates the function of flagella.

154. What are "protoplasts":

A. Bacteria completely lacking a cell wall.

B. Filtering forms of bacteria.

C. Bacteria forming S-forms.

D. Bacteria forming R-forms.

D. Bacteria partially lacking a cell wall.

155.What are "spheroplasts":

A. Bacteria partially lacking a cell wall.

B. Bacteria completely lacking a cell wall.

C. L-form bacteria.

D. Amphitrichous.

D. Cells from R-form colonies.

156.Which of the following scientists is the author of the world-recognized classification of microorganisms:

A. The Bergey.

B. Stiebeck.

V. Krasilnikov.

G. Grekov.

D. Linnaeus.

157. What are the names of microorganisms that lack a cell wall:

A. Mycoplasmas

B. Viruses.

C. Rickettsia.

D. Mycobacteria.

D. Actinomycetes.

158. Indicate the coccus that is a saprophyte:

A. Sarcina.

B. Staphylococcus.

C. Streptococcus.

D. Diplococcus.

D. Meningococcus.

159. The rules of immersion microscopy include:

A. Using a concave mirror.

B. Lowered condenser.

C. Raised condenser.

D. Using an objective with a magnification of 40.

D. Completely closed diaphragm.

160. What promotes the accumulation of calcium during the formation of spores in bacteria:

A. Dipicolinic acid.

B. Mureic acid.

C. Teichoic acid.

D. Phospholipids.

D. Lipopolysaccharides

161. The term "strain" means:

A. A culture of bacteria isolated from the body of a human, animal or the environment.

B. A group of bacteria isolated from a patient with the same tinctorial properties.

C. Bacteria cultured on artificial nutrient media.

D. A group of bacteria occupying a common ecological niche.

D. Highly virulent bacteria.

162. Where are viral RNA or DNA polymerase enzymes located:

A. In the genomic protein.

B. In the supercapsid.

C. In the genome.

D. In the glycoprotein.

D. In the capsule.

163. Which of the listed enzymes is synthesized by aerobes, unlike anaerobes:

A. Catalase.

B. Lipase.

C. Amylase.

D. Ribonuclease.

D. Hydrolase.

164. Which microorganism from obligate parasites develops intracellularly:

A. Rickettsia.

B. Staphylococcus.

C. Streptococcus.

D. Escherichia.

D. Proteus.

165. What is the name of the method of reproduction of viruses in the host cell:

A. Reproduction.

B. Budding.

C. Binary fission.

D. Sexual.

D. Cysts.

166. What is called tissue culture in virology:

A. A system of cells of one species, located in a special nutrient medium.

B. Cells of one species, grown on MPB.

C. Cells of one species, grown on MPA.

D. A cell layer obtained using a microtome.

D. Cells of one species, grown on sugar broth.

167. Alcohol is used to treat hands in the following concentration:

A. 70%.

B. 60%.

C. 80%.

D. 90%.

E. 100%.

168. Viruses are characterized by the following method of reproduction:

A. Disjunctive.

B. Conjunctive.

C. Sexual.

D. Reproductive.

D. Asexual.

169. Universal nutrient media include:

A. Meat-peptone broth (MPB).

B. Clotted whey.

C. Milk-salt agar.

D. Rappoport medium.

D. Blood agar.

170. Which of the listed enzymes is an aggressin:

A. Fibrinolysin.

B. Oxidase.

C. Ligase.

D. Saccharolytic.

D. Proteolytic.

171. Which microorganisms are resistant to drying:

A. Mycobacteria.

B. Treponema.

C. Leptospira.

D. Gonococci.

D. Meningococci.

172. The role of pigments in the vital activity of bacteria:

A. Protection from ultraviolet rays.

B. Protection from drying out.

C. Participation in nutrition.

D. Participation in the synthesis of enzymes.

D. Participation in the synthesis of structural proteins.

173. The microbial count of air is determined by:

A. Sowing on MPA using the sedimentation method.

B. On Endo medium.

C. Sowing on MPA using the streak method.

D. When sowing on YSA.

D. Using membrane filters.

174. Name the methods of sterilization at a temperature below 1000:

A. Tyndallization.

B. Boiling.

C. Dry heat.

D. Flowing steam.

D. Calcination over a fire.

175. Mechanism of action of penicillin on bacteria:

A. Inhibition of cell wall synthesis.

B. Inhibition of purine bases.

C. Action on bacterial cell ribosomes.

D. Disruption of the function of the cytoplasmic membrane.

D. Action on nucleic acids.

176. In which pathway of exchange of bacterial genetic material do temperate phages participate:

A. Transduction.

B. Conjugation.

C. Transformation.

D. Mutation.

D. Transcription.

177. Which microorganisms are part of the obligate microflora of the oral cavity:

A. Streptococcus salivarius.

B. Bordetella.

C. Pseudomonas.

D. Clostridia.

D. Mycoplasma.

178. What is meant by the term "dysbacteriosis":

A. Changes in the microbiocenosis of individual areas of a person.

B. Increase in saprophytic forms of bacteria in the microbiocenosis.

C. Presence of pathogenic forms of microorganisms in the microbiocenosis.

D. Increase in spore forms of microorganisms in the microbiocenosis.

D. Increase in capsular forms of microorganisms in the microbiocenosis.

179. Which cells of the body participate in three-cell cooperation during antibody genesis:

A. Macrophage, T-lymphocyte, B-lymphocyte.

B. T-suppressor, B-lymphocyte, E-killer.

C. E-killer, macrophage, neutrophil.

D. Fibroblast, macrophage, T-lymphocyte.

D. B-lymphocyte, macrophage, T-suppressor.

180. Which cells are the first to come into contact with antigens:

A. Macrophages.

B. T-helpers.

C. T-lymphocytes.

D. B-lymphocytes.

D. Plasma cells.

181. What does the transmission route of infection mean:

A. Through blood-sucking insects.

B. Through the oral cavity.

C. Through the air.

D. Through blood and blood products.

D. Sexual route.

182. When setting up which serological reaction is the hemolytic system used:

A. Complement fixation.

B. Toxin neutralization.

C. Indirect hemagglutination.

D. Inhibition of hemagglutination.

D. Agglutination.

183. The reason for weak post-infection immunity in staphylococcal infection:

A. Antigenic mimicry.

B. Weak virulence.

C. Absence of pathogenicity enzymes.

D. Sensitivity to a specific phage.

D. Tinctorial properties

184. Immunoglobulins that go beyond the mucous membranes into the lumen of the respiratory tract, intestines and other cavities:

A. Secretory.

B. Cavity.

C. Organ.

D. Organotropic.

D. Tissue.

185. In which reaction are incomplete antibodies determined:

A. Coombs.

B. Agglutination.

C. Precipitation.

D. Complement fixation.

D. Ascoli.

186. During the recovery period, the disease recurred. What is the name of this form of infection:

A. Relapse.

B. Mixed.

C. Reinfection.

D. Superinfection.

E. Secondary infection.

187. During the immunization process, a class of protective antibodies are produced in the following sequence:

A. M,G,A.

B. A,M,G.

C. D,A,E.

D. M,D,A.

D. G,M,A.

188. The size of viruses is determined by:

A. Ultracentrifugation.

B. In a light microscope.

C. Ocular micrometer.

D. In a phase-contrast microscope.

D. In an ultraviolet microscope.

189. Indicate the negative role of microorganisms in nature:

A. They cause various infections.

B. They are used in baking.

C. They are used as a chemical weapon.

D. They affect milk production.

D. They are used in the treatment of patients

190. What discoveries did L. Pasteur make:

A. Proved the participation of microbes in fermentation.

B. Discovered antibiotics.

C. Created a vaccine against measles

D. Created the theory of phagocytosis.

D. Discovered immunoglobulins.

191. Functions that pili-villi perform in microorganisms:

A. Adhesion.

B. Motility

C. Participates in respiration.

D. Protective.

D. Participates in division.

192. Diseases caused by chlamydia:

A. Trachoma.

B. Infarction

C. Dermatosis.

D. Bronchitis.

D. Diarrhea.

193. Properties and signs typical of viruses:

A. Have only RNA or DNA.

B. Have their own enzymes for metabolism.

C. Contain RNA and DNA.

D. Capable of growth and division.

D. Grow on all nutrient media.

194. The method of penetration of viruses into the cell:

A. Endocytosis-viropexys.

B. Facilitated diffusion

C. Active transport.

D. Passive diffusion.

D. Active diffusion.

195. Which structures are classified as intracellular inclusions of bacteria:

A. Volutin grains.

B. Lysosome

C. Mitochondria.

D. Golgi apparatus.

D. Nucleolus.

196.Which of the following chemical substances have a specific effect on the peptidoglycan layer of bacteria:

A. Penicillin.

B. Dyes

C. Tetracycline.

D. Plasmacoagulase.

D. Mucin.

197.Which staining methods are simple:

A. Burri.

B. Orzeszko

V. Gram.

G. Neisser.

D. Ziehl-Neelsen stain

198. Which of the following microorganisms are spore-forming:

A. Clostridia.

B. Gonococci

C. Staphylococci.

D. Escherichia.

D. Micrococci.

199. What colors are microorganisms stained with Gram staining:

A. Purple.

B. White

C. Black.

D. Yellow.

D. Green.

200. Chemical composition of the cell wall of Gram-negative bacteria:

A. Absence of teichoic acid.

B. Presence of alkalis

C. Thick layer of peptide glycan.

D. Presence of teichoic acid.

D. Presence of monopolysaccharides.