Prof. Lester's BIOL 210 Practice Exam 4 (There is no answer key. Please do not email or ask me for answers.)

Chapters 16, 17, 19, HIV/AIDS, TB, Quorum Sensing

1) Siderophores are bacterial proteins that compete with animal
A) Antibodies. B) Red blood cells. C) Transferrin. D) White blood cells. E) Receptors.

~~2) Which of the following is *NOT* considered entry via the parenteral route?~~
~~A) Injection B) Bite C) Surgery D) Hair follicle E) Skin cut~~

~~3) Which of the following does *NOT* contribute to the virulence of a pathogen?~~
~~A) Numbers of microorganisms that gain access to a host B) Cell wall~~
~~C) Toxins D) Enzymes E) All of the above contribute to a pathogen's virulence.~~

~~4) Lysogenic bacteriophages contribute to bacterial virulence because bacteriophages~~
~~A) Give new gene sequences to the host bacteria. B) Produce toxins.~~
~~C) Carry plasmids. D) Kill the bacteria causing release of endotoxins. E) Kill human cells.~~

5) Innate immunity is
A) The body's ability to ward off diseases. B) The body's defenses against any kind of pathogen.
C) The body's defense against a particular pathogen. D) The lack of resistance.
E) Increased susceptibility to disease.

6) Which of the following is *NOT* a physical factor protecting the skin and mucous membranes from infection?
A) Layers of cells B) Tears C) Saliva D) Lysozyme E) Ciliary escalator

7) The function of the "ciliary escalator" is to
A) Kill microorganisms. B) Remove microorganisms from body cavities.
C) Remove microorganisms from the lower respiratory tract.
D) Remove microorganisms from the upper respiratory tract. E) All of the above.

8) Which of the following is found normally in serum?
A) Complement B) Interferon C) Histamine D) Leukocytosis-promoting factor

9) Which of the following is *NOT* a way in which normal microbiota provide protection from infection?
A) They provide antibacterial chemicals. B) They outcompete newcomers.
C) They make the chemical environment unsuitable for nonresident bacteria.
D) They produce lysozyme. E) They change the pH of the environment.

10) Which of the following is *NOT* a function of inflammation?
A) To destroy an injurious agent B) To remove an injurious agent
C) To wall off an injurious agent D) To repair damaged tissue E) To produce antibodies

11) Chill is a sign that
A) Body temperature is falling. B) Body temperature is rising.
C) Body temperature will remain the same. D) Sweating will follow. E) None of the above.

12) The classical pathway for complement activation is initiated by
A) Polysaccharides and C3b. B) C5–C9. C) Antigen–antibody reactions.
D) Factors released from phagocytes. E) Factors released from damaged tissues.

13) What type of immunity results from vaccination?
A) Innate immunity B) Naturally acquired active immunity
C) Naturally acquired passive immunity D) Artificially acquired active immunity
E) Artificially acquired passive immunity

14) What type of immunity results from recovery from mumps?
A) Innate immunity B) Naturally acquired active immunity
C) Naturally acquired passive immunity D) Artificially acquired active immunity
E) Artificially acquired passive immunity

15) Newborns' immunity due to the transfer of antibodies across the placenta is an example of
A) Innate immunity. B) Naturally acquired active immunity.
C) Naturally acquired passive immunity. D) Artificially acquired active immunity.
E) Artificially acquired passive immunity.

16) What type of immunity results from injection of tetanus toxoid?
A) Innate immunity B) Naturally acquired active immunity
C) Naturally acquired passive immunity D) Artificially acquired active immunity
E) Artificially acquired passive immunity

17) Immunity due to injection of an antigen is an example of
A) Innate immunity. B) Naturally acquired active immunity.
C) Naturally acquired passive immunity. D) Artificially acquired active immunity.
E) Artificially acquired passive immunity.

18) The antibodies found in mucus, saliva, and tears are
A) IgG. B) IgM. C) IgA. D) IgD. E) IgE.

19) The antibodies found on B cells are
A) IgG. B) IgM. C) IgA. D) IgD. E) IgE.

20) The antibodies that can bind to large parasites are
A) IgG. B) IgM. C) IgA. D) IgD. E) IgE.

21) In addition to IgG, the antibodies that can fix complement are
A) IgG. B) IgM. C) IgA. D) IgD. E) IgE.

22) Large antibodies that agglutinate antigens are
A) IgG. B) IgM. C) IgA. D) IgD. E) IgE.

23) The most abundant class of antibodies in serum is

A) IgG. B) IgM. C) IgA. D) IgD. E) IgE.

24) The best definition of *antigen* is
A) Something foreign in the body.
B) A chemical that elicits an antibody response and can combine with these antibodies.
C) A chemical that combines with antibodies.
D) A pathogen.
E) A protein that combines with antibodies.

25) The best definition *antibody* is
A) A serum protein. B) A protein that inactivates or kills an antigen.
C) A protein made in response to an antigen that can combine with that antigen.
D) An immunoglobulin. E) A protein that combines with a protein or carbohydrate.

26) The presence of which of the following indicates a current infection rather than a previous infection or vaccination?
A) IgA B) IgG C) IgM D) IgD E) IgE

Don't forget Quorum Sensing

27) Hypersensitivity is due to
A) The presence of an antigen. B) Immunity. C) The presence of antibodies.
D) An altered immune response. E) Allergies.

28) Which of the following may result from systemic anaphylaxis?
A) Hay fever B) Asthma C) Shock D) Hives E) Immunodeficiency

29) Which type of transplant is least compatible?
A) Autograft B) Allograft C) Isograft D) Xenotransplant E) All of the above are equally compatible.

30) Graft-versus-host disease will most likely be a complication of
A) A skin graft. B) A bone marrow transplant. C) A blood transfusion.
D) An Rh incompatibility between mother and fetus. E) All of the above.

31) Autoimmunity is due to
A) IgG and IgM antibodies. B) IgA antibodies. C) IgD antibodies. D) IgE antibodies.

32) Allergic contact dermatitis is due to
A) Sensitized T cells. B) IgG antibodies. C) IgE antibodies. D) IgM antibodies.
E) Activated macrophages.

33) A hypersensitivity reaction occurs
A) During the first exposure to an antigen. B) On a second or subsequent exposure to an antigen.
C) In immunologically tolerant individuals. D) During autoimmune diseases.
E) In individuals with diseases of the immune system.

34) Which of the following statements about type I hypersensitivities is false?
A) They are cell-mediated. B) They involve IgE antibodies.
C) The symptoms are due to histamine. D) Antibodies are bound to host cells.
E) The symptoms occur soon after exposure to an antigen.

35) Which of the following blood transfusions are *incompatible*?

	Donor	Recipient
1.	AB, Rh^-	AB, Rh^+
2.	A, Rh^+	A, Rh^-
3.	A, Rh^+	O, Rh^+
4.	B, Rh^-	B, Rh^+
5.	B, Rh^+	A, Rh^+

A) 2 and 5 B) 1, 2, and 3 C) 2, 3, and 5 D) 3 and 4 E) 1 and 2

36) Hemolytic disease of the newborn can result from

A) An Rh^+ mother with an Rh^- fetus. B) An Rh^- mother with an Rh^+ fetus.
C) An AB mother with a B fetus. D) An AB mother with an O fetus.
E) An Rh^- mother and an A fetus.

37) Reaction of antigen with IgE antibodies attached to mast cells causes

A) Lysis of the cells. B) Release of chemical mediators. C) Complement fixation.
D) Agglutination. E) Hemolysis.

38) Which of the following may be inherited or result from HIV infection?

A) Immunologic enhancement B) Immunologic surveillance
C) Immunotherapy D) Immunosuppression
E) Autoimmunity

39) Treatment with certain drugs to reduce transplant rejection can cause

A) Immunologic enhancement. B) Immunologic surveillance.
C) Immunotherapy. D) Immunosuppression. E) Autoimmunity

40) Worldwide, the primary method of transmission of HIV is

A) Heterosexual intercourse. B) Homosexual intercourse. C) Intravenous drug use.
D) Blood transfusions. E) Nosocomial.

41) Which of the following does *NOT* transmit HIV?

A) Homosexual activity B) Heterosexual activity C) Hypodermic needles
D) Mosquitoes E) Human milk

42) Drugs, such as AZT and ddC, currently used to treat AIDS act by

A) Stimulatory T_H cells. B) Stopping DNA synthesis.
C) Promoting antibody formation. D) Neutralizing the virus. E) All of the above.

43) Which of the following is *NOT* considered a type I hypersensitivity?

A) Asthma B) Dust allergies C) Penicillin allergic reactions
D) Pollen allergies E) Transplant rejections

44) Desensitization involves injection of

A) Antigens. B) IgG antibodies. C) IgE antibodies. D) Antihistamine. E) Histamine.

45) In rheumatoid arthritis, IgM, IgG, and complement deposit in joints. This is an example of
A) Cytotoxic autoimmunity. B) Immune complex autoimmunity. C) Cell-mediated autoimmunity.
D) Immunosuppression. E) Acquired immunodeficiency.

46) Delayed hypersensitivities are due to
A) IgE antibodies. B) T cells. C) IgG antibodies. D) Platelets. E) Antibodies against self.

47. How is TB typically spread?

48. What percentage of LTBI (but not HIV infection) usually develop active TB? Dormant TB?

49. How has the HIV epidemic affected the rate of active TB over the past 30 years?

50. Explain in detail how pathogens regulate their virulence attack.