

Name _____

Biology 318 Winter 2006 - Exam 2

Use a Scantron to answer questions 1-30, all multiple choice.

1. Which is NOT an example of physical control?

- a. alcohol
- b. radiation
- c. filtration
- d. temperature

2. Botulism is associated with

- a. paralysis
- b. constant contraction
- c. nectrotizing enzymes
- d. encephalitis

3. Listeria cannot be effectively controlled by

- a. heating
- b. cooling
- c. antibiotics
- d. disinfectants

4. Which is FALSE about Clostridium pathogens?

- a. they form endospores
- b. they are associated with soil
- c. they die in the absence of oxygen
- d. they make toxins

5. Domagk was the first to describe or discover

- a. salvarsan
- b. streptomycin
- c. penicillin
- d. sulfa drugs

6. Microbes resist drugs by doing all EXCEPT

- a. making Ab to neutralize the drug
- b. making proteins to pump the drug out
- c. making enzymes that destroy the drug
- d. mutating receptors that uptake the drug

7. The only Gram (-) throat flora is

- a. Escherichia
- b. Neissera
- c. Enterobacter
- d. Pseudomonas

8. Infant botulism uniquely occurs in babies

- a. who have taken antibiotics
- b. who have eaten poorly canned food
- c. who have suffered puncture wounds
- d. who have eaten bacterial endospores

9. Semmelweis introduced

- a. medical handwashing
- b. antiseptics during surgery
- c. rules to control hospital overcrowding
- d. training procedures for nurses

10. Which nosocomial disease/agent is WRONG?

- a. pneumonia by Staphylococcus aureus
- b. UTI by Pseudomonas auruginosa
- c. pneumonia by Enterobacter
- d. UTI by Escherichia coli

11. In the US, nosocomials contribute to about

- a. 1 million deaths per year
- b. 100,000 deaths per year
- c. 10,000 deaths per year
- d. 1,000 deaths per year

12. Which natural defense is antiviral?

- a. complement
- b. interleukin
- c. interferon
- d. transferrin

13. The CELL-MEDIATED chain of command is:

- a. phagocyte to Helper-T to Killer-T
- b. Helper-T to phagocyte to Killer-T
- c. phagocyte to Helper-T to B-cell
- d. Helper-T to Killer-T to B-cell

14. How many different shaped Ab can people make?

- a. 100,000
- b. 1,000,000
- c. 10,000,000
- d. 100,000,000

15. Which of the following Ab statements is TRUE?

- a. IgG holds 4 Ag
- b. IgE is associated with Type I hypersensitivity
- c. IgM is made life-long after the first exposure
- d. Type IV hypersensitivity involves IgA

16. Rheumatic disorders are autoimmune reactions to

- a. Staphylococcus aureus
- b. Staphylococcus epidermidis
- c. Streptococcus pyogenes
- d. Haemophilus influenzae

17. Active acquired immunity involves all EXCEPT

- a. natural Ag exposure
- b. vaccine Ag exposure
- c. IgG
- d. maternal IgA

18. In 1798, Jenner made the first

- a. vaccine against smallpox
- b. vaccine against rabies
- c. IgG treatment against diphtheria
- d. IgG treatment against tetanus

19. The most effective kind of vaccine is

- a. inactivated whole
- b. live attenuated
- c. subunit - either version
- d. conjugate

20. Which is NOT a childhood vaccine disease?

- a. chickenpox
- b. pneumococcal pneumonia
- c. botulism
- d. tetanus

21. Ebola is a

- a. eukaryotic microbe
- b. virus
- c. prokaryotic microbe
- d. prion

22. Marburg is the name of the agent from

- a. the African/Yambuku human outbreak
- b. the European monkey/human outbreak
- c. the monkey outbreak in Reston, Virginia
- d. the New Guinea cannibal outbreak

23. Ebola doctors hoped to save their nurse using

- a. a controversial unapproved vaccine
- b. a controversial unapproved anti-viral drug
- c. survivor neutralizing Ab
- d. survivor Killer T-cells

24. Staphylococcus aureus causes all EXCEPT

- a. gas gangrene
- b. toxic shock syndrome
- c. impetigo
- d. food poisoning

25. Endotoxins would be present on all EXCEPT

- a. Neisseria meningitis
- b. Escherichia coli
- c. Clostridium perfringens
- d. Haemophilus influenzae

26. Exoenzymes include all EXCEPT

- a. hyaluronidase
- b. hemolysin
- c. streptokinase
- d. leukocidin

27. In lab, when testing bacteria for drug sensitivity,

- a. more resistant bacteria made larger clear zones
- b. all drugs should have affected bacteria the same
- c. you used Escherichia and Staphylococcus
- d. you tested both broad and limited spectrum drugs

28. Which is TRUE about Mannitol-Salt media

- a. it was used to selectively grow Gram (-) from skin
- b. it is differential
- c. Micrococcus turns the media yellow
- d. it shows whether bacteria make hemolysin

29. Which Ab test did you physically do in lab?

- a. agglutination
- b. ELISA
- c. opsonization
- d. neutralization

30. The key throat sampling consideration is to

- a. perform this invasive test under surgical conditions
- b. ensure tests are done IMMEDIATELY to save lives
- c. make sure the patient does not just spit saliva
- d. only collect from inflamed tonsil areas

Short Answer - Lecture

31. 2 pts. each - Mixed Definitions

COMMUNICABLE:

VECTOR:

PRODROMAL:

COMMENSAL:

IATROGENIC:

MORBIDITY:

32. Complete this table about antimicrobials. First 2 columns = 0.5 pts/box. Final column = 1 pt/box.

<u>Drug</u>	<u>Spectrum - Broad or Limited?</u>	<u>True Antibiotic - Yes or No?</u>	<u>Target in Cell</u>
Colistin			
Sulfa			
Ampicillin			
Streptomycin			

33. 3 pts. Based on lecture from this class, list THREE ways to reduce drug resistance.

33. 6 pts. Complete the following about nosocomial diseases. Rank = # patients killed annually.

<u>Nosocomial</u>	<u>Rank - 1, 2, or 3?</u>	<u>Body Target</u>	<u>One Contributing Nosocomial Factor</u>
UTI			
Septicemia			
Pneumonia			

34. 1 pt. per term. MATCH each term with its appropriate system by placing an X in a column.

<u>Term</u>	<u>First Line</u>	<u>Second Line</u>	<u>Humoral Only</u>	<u>Cell-Mediated Only</u>	<u>Mucosal</u>
Normal flora					
Lactoferrin					
Killer T-cells					
Phagocytes					
Complement					
B-cells					
Interleukin					
Transferrin					
IgA					
Stomach acid					

35. Complete the following vaccine/disease table. First 2 columns = 0.5 pts/box. Final column = 1 pt/box.

<u>Disease</u>	<u>Body System Affected</u>	<u>Kind of Agent</u>	<u>Kind of Vaccine</u>
Hepatitis B			
Smallpox			
Polio			
Pertussis			

35. 2 pts. per term. Answer any FOUR of the following; cross out anything you don't want me to grade

<u>Virulence Factor</u>	<u>Specific Function</u>	<u>Disease or Agent</u>
COAGULASE		
M PROTEIN		
ENDOTOXIN		
IgA PROTEASE		
STREPTOKINASE		

36. 4 pts - all or nothing. In the following test (which you should recognize from lab), 0.1 ml patient blood was placed in the first well, diluted 1/10 down the line, and then reacted with Ab. As with the lab problem, this test can detect 1 bacteria. Calculate the amount of bacteria in this patient's blood, being careful to state the proper units in your final answer.



37. 5 pts. As stated in your last lab assignment, list any FIVE of the 13 rules regarding proper specimen collection. Avoid telling me more than FIVE because I will only grade the first ones I see.