Pathogens Notesheet C. Kohn, Waterford WI

Name: Hour Date:

Date Assignment is due: Why late? Score: + ✓ -
 Day of Week Date If your project was late, describe why**Directions**: Use the accompanying PowerPoint (*available online*) to complete this sheet. This sheet will be due upon the completion of the PowerPoint in class. These assignments are graded on a +/✓/- scale.

1. What is a pathogen?
2. Most pathogens are but most microorganisms do not
3. What are examples of microorganisms?
4. In order to cause disease a pathogen must be able to
5. A pathogen most commonly gains entrance into an animal via
6. Mucus membranes include
7. Besides the mucus membranes, how else can a pathogen enter the body?
8. Most pathogens attack a .
9. While the of a pathogen can cause problems

inside the host’s body, damage is more often due to the
by the pathogen.
10. Why would a pathogen produce toxins? What do they enable the pathogen to do?
11. Briefly summarize the key traits of the six kinds of pathogens that lead to infectious disease. Use the entire line:
12. What are bacteria?
13. What are prokaryotes?
14. What are eukaryotes?
15. How does bacterial DNA differ from mammalian DNA?
16. What is a plasmid?
17. Most bacteria reproduce by
18. Briefly summarize three ways in which bacteria can be classified:

Method 1: Summary:

Method 2: Summary:

Method 3: Difference between Gram + and

Gram - :
19. When a gram stain is applied, gram positive bacteria turn and gram negative bacteria turn
20. A gram positive bacteria has a cell wall made mainly of , which is a

and is similar to the
21. Why does it matter if peptidoglycan is mesh-like? How does this affect gram positive bacteria?
22. This makes gram positive bacteria susceptible to most , and this makes it

easier to treat a bacterial infection than it is to treat a bacterial
infection.
23. Peptidoglycan can also be by produced by animal cells.
24. Gram negative bacteria have an due to the presence of

an on the
25. This outer membrane is like a and blocks

including .
26. The outer membrane is like a for gram negative

bacteria, repelling most
27. The outer membrane also protects gram negative from and from

including the of animals and engulfment by
28. Finally, the outer membrane can enable some species of gram negative bacteria to

(or ‘ ‘) to the of their hosts to increase their likelihood of
29. Gram negative bacteria contain in their cell and outer
30. What is an endotoxin?
31. What is an exotoxin?
32. Which is most common in gram negative? In gram positive?
33. If the of gram negative bacteria are

these endotoxins will be .
34. Endotoxins are very and can remain intact even after
35. These endotoxins cause an in animal hosts. The

inflammatory response due to the presence of toxins from bacteria can lead to
36. The inflammatory response means that all in the body
37. As ( ) occurs, the

 . This drop in blood pressure is known as
38. What happens to the heart during hypotension?
39. As a result of this hypotension, organs will not

due to ( ), and organ systems will begin

to .
40. What will happen to the kidneys?
41. What will happen to the lungs?
42. What is septic shock?
43. Summarize the five stages of septic shock:

Infection:

Bacteremia:

SIRS:

Sepsis:

Septic Shock:
44. What is a virus?
45. Viral genomes can be
46. How do we know that viruses are not alive?
47. The flu and common cold are caused by viruses? Would an antibiotic help? How do you know?
48. To reproduce, a virus must and the cell so that

it
49. How does a virus do this?
50. The cell then makes in order to
51. The cell assembles the into new . These newly-assembled

viruses are and then other cells, the process over and over.
52. What is a retrovirus?

 . Retroviruses have a unique enzyme called

 that allows them to

 . As the host’s cells divide, the reproduce the

 , making retroviruses difficult to
53. Retroviruses have a long which means
54. All viruses cause their respective diseases by
55. Describe four ways in which viruses can interrupt normal cellular or bodily function:
56. How are fungi like animals and plants?
57. True or false: a fungi is a plant. . Fungi can be either

(such as ) or (such as ).
58. What important role do fungi & bacteria play in ecosystems?
59. What is a common fungal pathogen in livestock?
60. Protozoa are single-celled (they have cellular ).
61. How are protozoa more like plants and animals than bacteria?
62. In what way are protozoa similar to bacteria and some yeast?
63. Protozoa lack , which make them and capable of
64. Protozoa often invade the of their hosts, causing

 . Other protozoa cause infection of the

causing it to which prevents and causes

 . The *Plasmodium* protozoa, which causes

destroys and causes , alternating

& , , and often .
65. Helminths, or , are multicellular

with .
66. There are three main classes of helminths: ( ),

 ( ), and ( ).
67. How are helminths unique?

If they don’t proliferate inside their hosts, how are they spread?
68. Why might a helminth disease be difficult to diagnose?
69. What are the two main ways in which a helminth affects its host?
70. Briefly summarize four helminth diseases:
71. What are prions? Are they alive? Are prions a species?
72. Prions affect their host by causing
73. Like a for a , the of a protein depends on its .
74. How does a prion cause problems in a host?
75. What are examples of prion diseases?
76. Prion diseases are most commonly spread through
77. How are scarpie, mad cow, CWD and kuru all similar in regards to their cause?
78. True or false: there is no treatment for any prion disease.

Unit Wrap-up C. Kohn, Agricultural Sciences - Waterford WI

This page is designed to help raise your grade while enabling you to develop skills you will need for after high
school. You will need to complete every question and blank in order to receive full credit for your notes. Note: if you cannot come up with a strategy to remember a difficult concept on your own, see your instructor for help.

1. What is a topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
2. What is a 2nd topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
3. What is a 3rd topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
4. Circle the most appropriate response. You will only be graded on whether or not you completed this section.

Circle one: *I used my notes outside of class to prepare for the quiz.* Definitely – Yes – Sort of - No

Circle one: *I took extra notes in the margins for very difficult concepts.* Definitely – Yes – Sort of - No

Circle one: *I created a personal strategy for at least three difficult items.* Definitely – Yes – Sort of - No

Circle one: *I was very involved and actively studying during the quiz review.* Definitely – Yes – Sort of - No

Circle one: *I think I will be satisfied with the quiz grade I received this week.* Definitely – Yes – Sort of - No

Circle one: *I might need to meet with the instructor outside of class.* Definitely – Yes – Sort of - No