

- 1) Can you remember which of these is a naked virus with no envelope?  
a) influenza   b) polio   c) corona   d) HIV
- 2) Which one of these could NOT be a type of influenza?   a) H2N2   b) H5N7   c) H1H3   d) H12N3
- 3) Which is true of a motor protein?  
a) It is made of amino acids.   b) It pulls endosomes through the cell.  
c) It travels along microtubule "highways."   d) It uses ATP energy to "walk"  
e) all of the above
- 4) CD4 is found on T cells, which are important members of your immune system.  
Which virus attaches to CD4?   a) HIV   b) Adenovirus   c) Influenza   d) Polio
- 5) Which receptor does coronavirus attach to?   a) CAR   b) CD4   c) CD155   d) ACE2
- 6) Which of these is NOT a glycoprotein?  
a) RNA   b) HA (hemagglutinin)   c) NA (neuraminidase)   d) the receptor on which sialic acid is found
- 7) What does "clathrin coating" of an endosome do?  
a) It helps the virus to bind to the endosome membrane.  
b) It acts like a scaffold, helping the endosome to form.  
c) It pulls the endosome along a microtubule, toward the nucleus.  
d) It acts like a scissor and cuts the endosome from the membrane.
- 8) Why are the proton pumps so important in these lessons?  
a) Because they are needed for the virus to be able to attach to a binding site.  
b) Because they are needed for the clathrin coating to be formed around the endosome.  
c) Because viruses use the protons as an energy source so they can move.  
d) Because viruses need low pH to cause shape changes that will allow it to get out of the endosome.
- 9) REVIEW: Which cycle is the one where the virus hides for a long time inside the host's genome?  
a) lytic   b) lysogenic

TRUE or FALSE?

- 10) \_\_\_\_\_ Cells can't communicate because they can't talk.
- 11) \_\_\_\_\_ Some enzymes act like scissors.
- 12) \_\_\_\_\_ Some viruses can stick to red blood cells.
- 13) \_\_\_\_\_ All viruses need to merge (fuse) with the host membrane.
- 14) \_\_\_\_\_ Cells have identification tags.
- 15) \_\_\_\_\_ Cell receptors where viruses bind were first discovered while Mrs. McHenry (the author) was a young adult (after college graduation).

INTRO TO VIROLOGY

QUIZ for lesson 5

ANSWER KEY

1) b

2) c (You must have an H followed by an N.)

3) e

4) a

5) d

6) a

7) b

8) d

9) b

10) F

11) T

12) T

13) F

14) T

15) T (Yes, when the first binding site was discovered (sialic acid for influenza in 1985) I had already finished college. So I could not possibly have learned this, even in a college class. Just think how far ahead of me you are!)