APPENDIX A

Questionnaire on Viruses and Influenza

The goal of this questionnaire is to know your conceptions on viruses and influenza biology (what you know on these topics). You are not taking a test and you are not expected to know all the answers. You don't have to write your name on the questionnaire.

PART 1:
For this part, write down everything you know in details.

1. What is a virus?

2. Can you describe the structure (proteins, genome) of influenza virus?

3. How influenza viruses (or viruses in general) are infecting specific target cells?

PART 2:
Choose only one answer and circle.

1. Why is it necessary to get a new influenza vaccine shot every year?
    a. Each year, researchers improve the vaccine and more antibodies are produced.
    b. Mutations may lead to gradual changes in the surface proteins of influenza. Due to these mutations, your immune system will not be able to produce neutralizing antibodies.
    c. Mutations may lead to changes in the genome of influenza. Due to these mutations, the virus replicate faster and you need a new shot to stop the replication.
    d. Antibodies production is decreased because the shot you got last year doesn't work any more.

    (Answer b)

2. Can you explain at the cellular level how and why there are influenza pandemics?
    a. Pandemics result from genetic reassortment between two viruses that have different surface antigens. This phenomenon results in abrupt changes in the strains of the virus and your immune system fails to recognize the new virus.
    b. Mutations may lead to gradual changes in the surface proteins of influenza. Due to these mutations, your immune system will not be able to produce neutralizing antibodies
    c. Because some people are predisposed to viral infection due to immunodeficiency.

    (Answer a)

3. Herd immunity is achieved when ___% of a population is vaccinated.
    a. 100%
    b. 70%
    c. 50%
    d. 10%

    (Answer b)

4. What is the composition of the influenza vaccine?
    a. Antibodies against influenza.
    b. Antibiotics.
    c. An injection of chemical that improve your immune system.
    d. Influenza virus that has been inactivated.

    (Answer d)

5. To the best of your knowledge, what percentage of a typical population of high school students gets the influenza vaccine each year?
    a. 0%
    b. 5%
    c. 70%
    d. 100%

    (Answer b)