**These are the short answer and essay questions for the test. In addition there will be 20 M/C and 5 fill ins!**

**Short Answer**

26. How does an antigen-antibody complex protect the body? Provide at least two examples and explain.

27. You get a splinter in your finger, which becomes sore and swollen. In a few days, pus forms around the splinter. Explain what process is occurring.

28. What is the difference between passive and active immunity? Give an example of each.

29. Of what advantage it is to a virus to initiate a lysogenic infection? Such viruses are sometimes called "temperate," a name that give the impression that they are in some way "kinder and gentler." Why is such an impression misleading?

**Essays -**

30. a. How does reverse transcriptase allow an RNA virus like HIV to incorporate itself into the host cell genome?

b. Most drugs that interfere with viral reproduction also poison the host cell. Why is it possible to treat HIV infections with a drug that blocks reverse transcriptase?

31. The ELISA test is useful in identifying EITHER the presence (or absence) of antibodies to a pathogen or the presence of the pathogen itself in a patient’s blood serum. Assume you are being tested for Lyme disease and that your possible exposure occurred several weeks ago.

DRAW a labeled diagram which OUTLINES the 4-5 major steps in this test. Number each step in their proper order and be sure to identify each solution, what is being tested for, and what should be used as controls.

32. a. Draw a diagram illustrating the structure of an antibody.

Identify: - which part of an antibody is constant and which is variable, and

- where the binding sites for antigens are located.

b. To what class of molecule do antibodies belong?

c. What is another name for an antibody?

d. Explain how the ELISA test makes use of the fact that other animals also make antibodies.

e. Explain how vaccines influence the production of antibodies.