Part 1

1. What is the difference between HIV and AIDS?
HIV is the virus that causes AIDS.

2. List and explain the major routes of HIV transmission.
- Sexual transmission: If an infected body's sexual fluids enter the bloodstream of another person, it can be contaminated and lead to HIV.
- Sharing needles used by infected persons can transmit the HIV virus.
- Rarer cases have been reported through other activities or actions that can involve transferring blood or semen, (i.e. Tattoos, acupuncture, artificial insemination, or blood transfusions.)

3. What does seropositive mean and how is a person tested for HIV?
It means giving a positive result in a test of blood serum for the presence of a virus. To test a person, a doctor or other trained health worker will take a blood sample usually from your arm and test it right there in front of you or take it to a lab to be tested. Oral tests are also sometimes performed.

4. What are some symptoms associated with acute phase HIV infection? What are the symptoms of AIDS?
Symptoms of HIV may include flu-like symptoms including fever, sore throat, headache, rash, or swollen lymph glands. Symptoms of AIDS include seizures, vision loss, painful swallowing, severe diarrhea, fever, coma, weight loss, and more.

5. What benefit(s) are associated with Magic Johnson's announcement concerning his HIV-positive status? What risks or drawbacks can you think of associated with his announcement?
The benefits may be since he quit the NBA he might be able to focus more on his health, like eating habits and getting enough sleep. He can have more time to raise awareness about AIDS. A drawback is that people might not think of him as the same great basketball player, and maybe seen differently in the public eye.

Part 2

1. What is meant by virus load? Draw a graph of a typical virus load profile for an HIV-infected individual.
A virus load is a measurement of the amount of active HIV in the infected person's blood.

Sources:
http://www.avert.org/testing.htm
4. http://hivinsite.ucsf.edu/hiv?page=basics-00-02
http://www.ucsfhealth.org/conditions/aids/signs_and_symptoms.html
http://labtestsonline.org/understanding/analytes/viral-load/tab/test
2. Based on the HIV life cycle, propose potential anti-HIV treatment targets. Which targets would be most effective in blocking HIV infection? Which targets would be least effective?

Most effective would be to attack it when it's connecting to the cells. The least would be to attack the HIV protein chain.

3. Since Magic Johnson's virus load is undetectable, is he cured of HIV? Support your answer with biological reasons.

No, he isn't cured of HIV. The vitamins and life choices he's involved with keep the virus load tests from detecting his HIV, but it's still in his system. As Johnson gets older his immune system won't be as strong and his HIV will start taking over and eventually turn into AIDS.

4. What is the advantage of using multiple targets during HAART?

If multiple targets are affecting the HIV virus then it has less chance of moving on in its life cycle and the virus will not progress or it may progress at a much slower pace.

5. I don’t believe that the drugs are available to everyone because the drugs are very expensive and people that have HIV usually live in areas where poverty is present so it is hard for them to afford the drugs.

6. Having Johnson as a spokesperson will have a positive impact because people will realize that anyone can get it and not to stereotype certain people. Even the most powerful people that don’t live in poverty can acquire HIV. Johnson’s basketball supporters may change their views on people with HIV and start to give more support to those who have it. Magic Johnson is also African American so he can connect better with the majority of people that have HIV. Some of the urban black population living

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6 Image credit: http://hyperthermia-treatment.com/aids_stories.html


8 http://www.haartnc.org/
Mario & Emily
Case Study
HIV Abracadabra

Using Magic Johnson as a spokesperson will positively affect the future of GlaxoSmithKline. People will develop a sense of safety for their health with this company and GSK will get even more control in the antiretroviral drug market. With HIV don’t trust the health care system and they feel they can trust and believe in Magic Johnson.