



1ST SEM. 2008/2009

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

**PROGRAMME : B.Sc. in Agric. Econ. & Agribus. Mngt.
B.Sc. in Agricultural Education
B.Sc. in Agronomy
B.Sc. in Animal Science
B.Sc. in Food Sc., Nutrition &
Technology
B.Sc. in Home Economics
B.Sc. in Home Economics Education
B.Sc. in Horticulture
B.Sc. in Land Water Management
B.Sc. in Textile & Apparel Des. &
Mngt.**

COURSE CODE : AGR 101

TITLE OF PAPER : HIV & AIDS

TIME ALLOWED : TWO (2) HOURS

**INSTRUCTIONS : ANSWER ALL FOUR (4)
QUESTIONS**

**ANSWER QUESTION 1 AND 2 ON
SAME BOOKLET AND QUESTION
3 AND 4 ON SEPARATE
BOOKLETS**

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QUESTION 1

- (a) Identify
- i) The three ways a mother can transmit HIV to her baby/child (3)
 - ii) The two conditions that must be present for transmission of HIV. (2)
 - iii) Three tests by which HIV can be diagnosed (3)
- (b) Change of behaviour for prevention depends on the individual's
- i) self.....
 - ii) perception of
 - iii) perception of serious.....
 - iv) belief that
 - v) experiencing (5)
- (c) The ARV drugs reduce the virus by attacking it at different stages
Name these (3)
- (d) State the rules for taking ARVs (4)
- (e) Which organ is affected when your eyes become yellow? (1)
- (f) Our motivational speaker identified three (3) things he does to stay healthy;
name these (3)
- (g) One of the key points in nutrition and HIV is that malnutrition can lead to the
following..... (1)

[TOTAL = 25 MARKS]

QUESTION 2

- (a) In HIV infection people are advised to take vitamins and minerals as supplements. Name the vitamins and minerals that (6)
- i) boosts immune functioning.....
 - ii) keeps lining of gut, lungs and skins healthy.....
 - iii) boosts immune system.....
 - iv) strengthens bones.....
 - v) fights infections and helps healing.....
 - vi) boosts production of T cells.....
- (b) The following are sexual behaviours. Choose from 1) to 3) those behaviours that: e.g. i = 2
- 1) Can lead to the transmission of HIV
 - 2) Are safer sex practices and
 - 3) Are morally wrong
 - i) incest.....
 - ii) masturbation.....
 - iii) oral sex.....
 - iv) pedophilia.....
 - v) masochism.....
 - vi) sadism.....
 - vii) Sodomy.....
 - viii) Voyeurism.....
 - ix) Exhibitionism.....
 - x) zoophilia/bestiality.....
 - xi) Frotteusexual.....
 - xii) Gerontosexual.....
 - xiii) Coprophilia.....
 - xiv) Necrophilia (14)
- (c) List **five (5)** side effects of antiretroviral drugs. (5)

[TOTAL 25 MARKS]

QUESTION 3

- i. The table below shows parts of the body's defence system. In each case, decide whether it is active/specific or passive/non-specific. Write your answers in the column provided. (6)

Defence	Specific/Non-specific
a. Lysozyme in saliva	
b. Plasma B cells	
c. Macrophages	
d. Anti-bacterial enzymes in tears	
e. Memory B and T lymphocytes	
f. Mucus in the lungs	

Consider the statements below. In each case, encircle the best answer. (1 Mark for each correct response)

- ii. **The immune system only reacts against living pathogens.**
- a. True
 - b. False
 - c. Not sure
- iii. **What is a pathogen?**
- a. A molecule on the surface of a bacteria
 - b. An organism that causes a disease
 - c. A cell that can enter the body
 - d. An antigen
- iv. **What are antibodies?**
- a. Types of white blood cells
 - b. Specific proteins that destroy pathogens

- c. Molecules on the surface of pathogens
 - d. Humoral immune response

- v. **How does vaccination work?**
 - a. The immune system produces antibodies, which stay in the blood.
 - b. The dead pathogen stays in the body and constantly stimulates the immune system
 - c. Memory lymphocytes are produced. They remain in the body to fight off any future infection with the live pathogen.
 - d. The pathogen stays in the body stimulating the production of lymphocytes thus inducing long-term immunity

- vi. **What is normally given to the body in a passive vaccination?**
 - a. Antibodies against the disease
 - b. Dead pathogens or parts of their antigens
 - c. Live pathogens to stimulate the immune system
 - d. Attenuated (weakened) pathogens to stimulate the immune system

- vii. **What is an antigen?**
 - a. A marker molecule on the surface of a pathogen
 - b. A molecule on the surface of a white blood cell
 - c. Protein made by lymphocytes that kill pathogens
 - d. All of the above

- viii. **A virus causes influenza. What measures would be effective against a viral infection?**
 - a. Antibiotics
 - b. Antibiotics and vaccination
 - c. Vaccination
 - d. Lemon juice

- ix. What does the Human Immunodeficiency Virus (HIV) preferentially attack?**
- a. Liver cells
 - b. Blood cells
 - c. Brain cells
 - d. White blood cells
- x. What does it mean when a person is said to have 'full blown AIDS'?**
- a. The HIV has damaged their immune system so that it no longer works
 - b. They are infected with HIV but not showing any symptoms
 - c. A blood test has shown that they have antibodies against the HIV in their blood.
 - d. They have tuberculosis and meningitis
- xi. CD4 is the name of...**
- a. A mutated form of HIV.
 - b. Method used to assess extend of HIV infection
 - c. A receptor protein.
 - d. An anti-AIDS drug.
 - e. A virus related to HIV.
 - f. None of the above.
- xii. Protease and reverse transcriptase are...**
- a. Host cell's enzymes
 - b. Special HIV proteins.
 - c. Anti-HIV drugs
 - d. Parts of the immune system.
 - e. All of the above.

- xiii. T cells which precipitate the production of antibodies by B cells are called
- a. Macrophages
 - b. Cytotoxic T cells
 - c. Helper T cells
 - d. Suppressor T cells
 - e. Stem cells
- xiv. How big is an HIV particle?
- a. 1/10,000 of a micrometre
 - b. 1/10,000 of a nanometre
 - c. 1/10,000 of a centimetre
 - d. 1/10,000 of a millimetre
 - e. 1×10^{-6} metres
- xv. What is the function of the enzyme HIV protease? (2)
- xvi. What does CD in CD4 and CD8 stand for? (2)
- xvii. Why is the HIV classified as a retrovirus? (2)

[TOTAL = 25 MARKS]

QUESTION 4

- a) "Let your food be your medicine" Discuss the statement with respect to the use of crop plants in the management of HIV and AIDS. (15)
- b) Voluntary counselling and testing can be an entry point to access some services: List four of them. e.g. Peer, social and community support (4)
- c) Basic communication skills for counselling include attending, list three other skills. (3)
- d) Eating defensively reduces micro-organisms in food. What activities do we have to do to demonstrate defensive eating. (3)

[TOTAL = 25 MARKS]