



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE  
AND TECHNOLOGY  
UNIVERSITY EXAMINATIONS 2012/2013  
2<sup>ND</sup> YEAR 2<sup>ND</sup> SEMESTER EXAMINATIONS FOR THE  
DEGREE OF BACHELOR OF SCIENCE IN COMMUNITY  
HEALTH AND DEVELOPMENT & BACHELOR OF SCIENCE  
IN PUBLIC HEALTH  
(KISUMU LEARNING CENTRE)**

**COURSE CODE: HCD 3228**

**COURSE TITLE: MEDICAL MYCOLOGY**

**DATE: 15/4/2013                      TIME: 14.00-16.00PM**

**DURATION: 2 HOURS**

**INSTRUCTIONS**

1. This paper contains TWO sections.
2. Answer ALL questions in section A (Compulsory) and ANY other Two questions in section B.
3. Write all answers in the booklet provided.

**SECTION A: Answer all the Questions in this section (3 Marks each)**

1. a. Define thermal dimorphism. **[1mark]**  
b. Briefly explain what function does thermal dimorphism serve in a human host. **[2 Marks]**
2. State the types of septal structures. **[3 Marks]**
3. Briefly describe why the use of broad-spectrum oral antibiotics often leads to vulvovaginal super-infections. **[3 Marks]**
4. State the effects of mycotoxicosis. **[3 Marks]**
5. Obesity is one of the factors that may predispose one to fungal infections. Briefly explain. **[3 Marks]**
6. State the biological importance of fungal spores. **[3 Marks]**
7. Climatic changes are known to increase exposure to mycotoxins. Briefly explain. **[3 Marks]**
8. State the routes of exposure to mycotoxins. **[3 Marks]**
9. Aseptate hyphae are considered to be more primitive. Briefly explain. **[3 Marks]**
10. State virulence factors that promote fungal colonization of a human host. **[3 Marks]**

**SECTION B: Answer ANY 2 (TWO) Questions in this section**

1. a. Describe the clinical nomenclatures used for the classification of mycoses. **[8 marks]**  
b. A premature infant on intravenous nutrients and high-lipid fluids has developed a fungemia that cultures out on sabarouds agar only when overlaid (enriched) with sterile olive oil (lipids). Name the most likely causative agent. Describe the epidemiology, clinical manifestation, laboratory diagnosis and management of the causative agent. **[12 marks]**
2. a. Describe aflatoxicosis **[8 marks]**  
b. A 5 days old baby has developed a white/milk curd like coating on her buccal mucosa extending onto her lips. It appears to be painful on swallowing, coupled with dryness of the mouth, and loss of taste. Name the most likely causative agent. Describe the epidemiology, clinical manifestation, laboratory diagnosis and management of the causative agent. **[12 marks]**  
c.
3. Human immunodeficiency virus (HIV)-positive patient has been complaining of a stiff neck and a severe headache. The headache was initially lessened by analgesics, but the analgesics are no longer effective. Cerebral Spinal fluid (CSF) is removed and microscopic examination indicates the presence of a capsule around the yeast cell. Patient's current CD4<sup>+</sup> count is 180/mm<sup>3</sup>. Name the most likely causative agent. Describe the epidemiology, clinical manifestation, laboratory diagnosis and management of the causative agent. **[20 marks]**

4. Describe the following:
- a. Systematic classification of fungi based on sexual reproduction. [**8 Marks**]
  - b. How yeasts reproduce sexually and asexually. [**12 marks**].