



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY
SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES
DEPARTMENT OF BIOLOGICAL SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF
EDUCATION SCIENCE WITH IT
3RD YEAR 1ST SEMESTER 2016/2017 ACADEMIC YEAR
MAIN CAMPUS - REGULAR

COURSE CODE: SBT 303

COURSE TITLE: MYCOLOGY I

EXAM VENUE: LAB 1 2ND FL

STREAM: (BED SC)

DATE: 20/04/17

EXAM SESSION: 9.00 – 11.00 AM

TIME: 2 HOURS

Instructions:

- 1. Answer ALL questions in Section A and Any two questions in Section B**
 - 2. Candidates are advised not to write on question paper**
 - 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**
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SECTION A: SHORT ANSWER QUESTIONS (30 MARKS)

1. Explain the different kinds of flagella occurring in fungi (3 marks)
2. Distinguish between two forms of vegetative reproduction in the fungal class *Myxomycetes* (2 marks)
3. Define the following terms used to describe different stages of the life cycle of the genus *Phytophthora*
 - (i) Reniform zoospores (2 marks)
 - (ii) Amphigynous sexual reproduction (2 marks)
4. Use a diagram to illustrate gametangial copulation in the fungal Division Zygomycota (3 marks)
5. State three possible causes of heterokaryosis in fungi (3 marks)
6. Distinguish between bipolar and tetrapolar heterothallism (4 marks)
7. List four economic importance of *Saccharomyces cerevisiae* (2 marks)
8. Explain three ways by which conidiophores are formed in Ascomycetes fungi (3 marks)
9. Explain the process by which the Division Zygomycota develop secondary mycelia (3 marks)
10. Use diagrams to distinguish between the different forms of Phragmobasidia in the Division Basidiomycota (3 marks)

SECTION B: ESSAY QUESTIONS (40 MARKS)

11. a) Describe antagonism between soil microbiota and fungi under the following sub-headings.
 - i) Exploitation (4 marks)
 - ii) Antibiosis (4 marks)
 - iii) Competition (4 Marks)b) Explain the characteristics which give fungi a favourable competitive ability in the soil (8 marks)
12. a) Discuss the mechanism of food sourcing by the following predacious fungi
 - i) Imperfect fungi (5 marks)
 - ii) Zoopagales (5 marks)b) Use appropriate illustrations to explain the following forms of fungal parasites
 - i) Biotrophic fungi (5 marks)
 - ii) Necrotrophic fungi (5 marks)
13. Discuss the economic importance of fungi to human (20 marks)
14. Discuss the various forms of fungal diseases in humans (20 marks)