

NATIONAL UNIVERSITY OF LESOTHO
FACULTY OF HEALTH SCIENCES

FHS2303 - MICROBIOLOGY AND PARASITOLOGY

Supplementary exam

Marks 100

Time 3 hours

INSTRUCTIONS:

1. The paper consists of 3 Sections
 2. Answer **ALL** questions in Section A and Section B
 3. Answer **Four** questions in section C
 4. **Answers written in pencil will not be marked**
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SECTION A

ANSWER ALL QUESTIONS: SECTION A CARRIES 20 MARKS

Question 1

Define the following medical terms

- a. Mitosomes [2]
- b. Psychotolerant [2]
- c. Normal flora [2]
- d. Virulence [2]
- e. Phagocytosis [2]

Question 2

Say whether the statements below are **True** or **False**.

- a. *Streptococcus mutans* is commonly found in the gastrointestinal tract of humans [1]
- b. Some cells can form new cell structures for survival [1]
- c. Eukaryotic cells contain a plasmid [1]
- d. All microbial cells are motile [1]
- e. Lenses on which oil is used are called oil immersion lenses [1]
- f. Most *Klebsiella* strains fix nitrogen [1]
- g. Kanamycin forms part of the first line treatment of Tuberculosis [1]
- h. Tinea pedis is a fungal skin infection [1]
- i. All sexually transmitted infections are caused by viruses [1]

j. *Legionella pneumophila* is present in freshwaters and in soil [1]

SECTION B

ANSWER ALL QUESTIONS: SECTION B CARRIES 40 MARKS

Question 1

Explain the theoretical aspects of Koch's postulate for providing cause and effect in infectious diseases [5]

Question 2

Describe the procedure followed when doing a Grams stain [5]

Question 3

List the 5 types of light microscopy [5]

Question 4

Describe the antigenic structure of *Enterobacteriaceae* [5]

Question 5

What are the growth characteristics of *Firmicutes*? [5]

Question 6

How can hospital acquired infections be transmitted? [5]

Question 7

What is the prevention and treatment of staphylococcal food poisoning? [5]

Question 8

Discuss the complications of untreated syphilis infection [5]

SECTION C

ANSWER FOUR QUESTIONS: SECTION C CARRIES 40 MARKS

Question 1

Discuss the host defence mechanisms against diseases [10]

Question 2

Mention and explain 5 factors that influence microbial growth [10]

Question 3

What are the risk factors and complications of Tuberculosis [10]

Question 4

Microbial pathogenesis is the process by which microorganisms cause disease.

Briefly discuss the steps of microbial pathogenesis [10]

Question 5

Compare and contrast the cellular structures of prokaryotic and eukaryotic cells

[10]