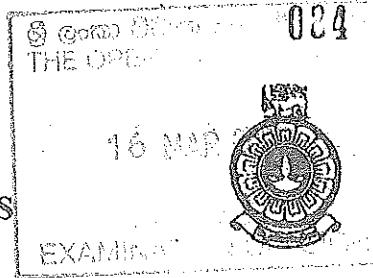


THE OPEN UNIVERSITY OF SRI LANKA  
FACULTY OF HEALTH SCIENCES  
DEPARTMENT OF MEDICAL LABORATORY SCIENCES  
ACADEMIC YEAR 2022/2023 – SEMESTER I



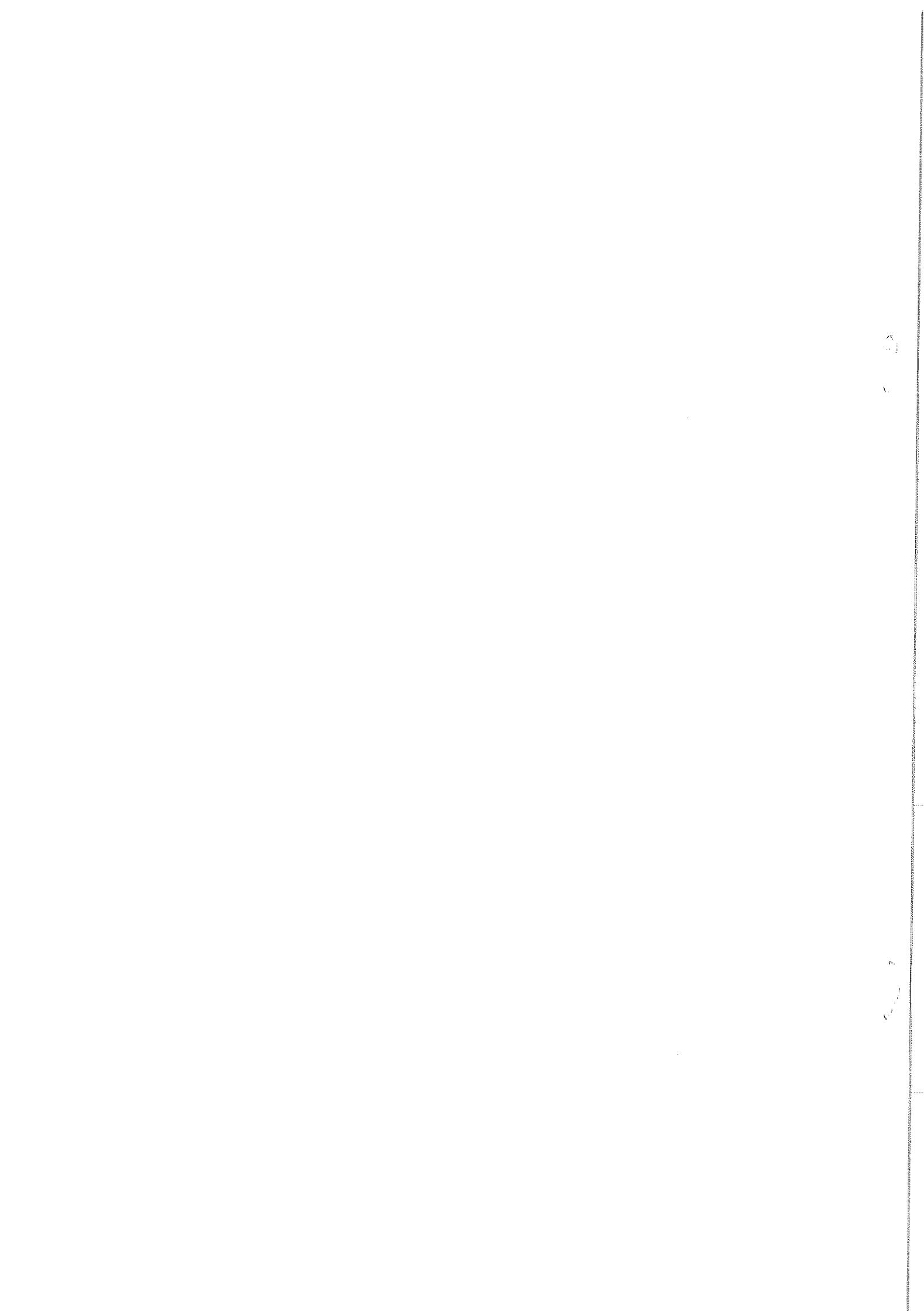
BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS  
MDU4307 – VIROLOGY & MYCOLOGY – LEVEL 4  
FINAL EXAMINATION

DURATION: 03 HOURS

DATE: 16<sup>TH</sup> MARCH 2023

TIME: 9.30 AM – 12.30 PM

INDEX NUMBER: .....



INDEX NO: .....

**PART B – Structured Essay Questions (40 Marks)**

**1.0** Viral hepatitis is mainly caused by five different viruses which belong to distinct virus families and they are ordered alphabetically according to their discovery.

1.1. Mention five (05) different hepatitis viruses and the main mode of transmission of each of these viruses. (2 marks)

	<b>Virus</b>	<b>Main mode of transmission</b>
i.		
ii.		
iii.		
iv.		
v.		

1.2 Serologic markers play an important role in diagnosis of hepatitis B. Outline four (04) serologic markers of hepatitis B and their role in diagnosis of hepatitis B. (4 marks)

	<b>Marker</b>	<b>Role in diagnosis of hepatitis B</b>
i.		
ii.		
iii.		
iv.		

1.3 Discuss the actions that should be taken following possible exposure to hepatitis B virus after accidental needle stick injury in the laboratory. (04 marks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

**(Total: 10 Marks)**

INDEX NO: .....

2.0 Acquired immune deficiency syndrome (AIDS) is caused by human immunodeficiency virus (HIV) which is known to be sexually transmitted from one person to another.

2.1. What is AIDS? (01 mark)

.....  
.....  
.....  
.....

2.2. State four (04) group of people who are recommended for screening for HIV. (01 mark)

i. .... ii.....  
iii..... iv.....

2.3. Outline the different types of laboratory techniques for detecting HIV and the purpose of each testing in diagnosis of the infection/ progression of the disease. (04 marks)

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

2.4. Briefly discuss two (02) different approaches for prevention and control of HIV.

(04 marks)

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

**(Total: 10 Marks)**

**3.0** 50-year-old uncontrolled diabetic patient presented with sudden onset facial pain and swelling. Invasive fungal sinusitis was suspected.

3.1. Name two (2) mould genera that can cause invasive fungal sinusitis. (2 marks)

- i.....  
ii.....

3.2. Outline the important steps in the processing of the sample collected from the sinuses from this patient. (4 marks)

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

INDEX NO: .....

3.3. Describe how you would differentiate the two genera mentioned in 3.1 in the laboratory.  
(04 marks)

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

**(Total: 10 Marks)**

4.0 28-year-old leukaemia patient presented with high grade fever not responding to broad spectrum antibiotics.

4.1. Name one (01) yeast that can lead to infection in this patient. (2 marks)

.....

4.2. How would you process the blood culture sample of above patient by automated blood culture bottle? (4 marks)

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

4.3. Describe one (01) test used in the identification of the yeast with the expected findings.

(04 marks)

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

**(Total: 10 Marks)**

#### **PART C – Essay Questions (30 marks)**

1. Discusses the three (03) different vector control approaches for prevention of dengue.  
(15 marks)
2. Ten-year-old boy presented with a suspected dermatophyte lesion in the scalp.  
(15 marks)