



THE OPEN UNIVERSITY OF SRI LANKA  
FACULTY OF HEALTH SCIENCES  
DEPARTMENT OF MEDICAL LABORATORY SCIENCES

ACADEMIC YEAR 2024/2025 – SEMESTER I

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS

MDU4307 – VIROLOGY & MYCOLOGY

FINAL EXAMINATION

DURATION: 03 HOURS

DATE: 02<sup>nd</sup> May 2025

TIME: 9.30 AM – 12.30 PM

**Part B: Structured Essay Questions (40 marks)**

**Q1.** Cell culture is a gold standard method for virus isolation.

1.1 List three (03) methods of virus isolation other than cell culture. (1.5 Marks)

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1.2 List three (03) types of cell culture lines stating the advantage and disadvantage of each.

(3.5 Marks)

Type of cell culture	Advantage	Disadvantage
1.		
2.		
3.		

1.3 Mention two (02) methods of direct observation of viruses with one example. (02 Marks)

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1.4 Briefly describe the serological tests in the diagnosis of viral infections. (03 Marks)

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(Total 10 marks)

Q2. Viral infections are caused by small organisms called viruses, which exploit cells to replicate themselves.

2.1. Mention five (05) modes of transmission of the Hepatitis B virus. (2.5 Marks)

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2.2. Briefly describe the laboratory diagnosis of Hepatitis B. (2.5 Marks)

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2.3. List four (04) viruses (other than influenza virus) that cause upper respiratory tract infection. (02 Marks)

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2.4. Why does influenza cause epidemic & pandemics? (03 Marks)

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(Total 10 marks)

Q3. Fungal infection, also known as mycosis, is a disease caused by fungi

3.1. What is the causative agent of pityriasis versicolor (tinea versicolor)? (01 Marks)

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3.2 a) Mention how you would collect the specimen to identify the above-mentioned organism. (02 Marks)

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b) Outline the laboratory diagnosis of above mention organism. (02 Marks)

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3.3. Explain the Endothrix fungal infection (01Marks)

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3.4. Mention two (02) common species of *Aspurgillus*. (04 Marks)

Species	Macroscopic appearance	Microscopic appearance

(Total 10 marks)

**Q4.** Candidiasis is a fungal infection due to any species of the genus *Candida*.

4.1 Mention three (03) common sites of *Candida* infections in the human body. (1.5 Marks)

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4.2 Mention three (03) common species of *Candida* that cause infections? (1.5 Marks)

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4.3 What are the morphological features of *Candida albicans* observed in Gram staining?

(02 Marks)

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4.4. Briefly describe how the germ tube test helps in identifying *Candida albicans*.

(05 Marks)

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**(Total 10 Marks)**

**Part C: Essay Question. (30 marks)**

**Question 01**

Describe the laboratory diagnosis of dengue hemorrhagic fever. (15 Marks)

**Question 02**

Write a short note on dermatophytosis, including its species, morphology, colony characteristics, diseases caused, and laboratory diagnosis. (15 Marks)

**(Total 30 Marks)**

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