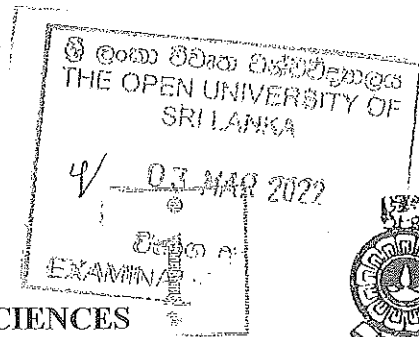


THE OPEN UNIVERSITY OF SRI LANKA  
FACULTY OF HEALTH SCIENCES  
DEPARTMENT OF MEDICAL LABORATORY SCIENCES  
ACADEMIC YEAR 2020/2021 – SEMESTER I



00246



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

DURATION: 03 HOURS

DATE: 03<sup>RD</sup> MARCH 2022

TIME: 01.30PM – 04.30PM

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INDEX NO: .....

**PART B – Structured Essay Questions (40 Marks)****1.**

1.1 List seven (07) steps of viral replication. (04 marks)

- i. ....
- ii. ....
- iii. ....
- iv. ....
- v. ....
- vi. ....
- vii. ....

1.2 List four (04) mechanisms of innate immunity. (02 marks)

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

1.3 List two (02) types of viral infections (considering the duration of infection) giving definition of each. (04 marks)

Type of infection	Definition
i.	
ii.	

**(Total: 10 Marks)**

2.

2.1 List the suffixes for different viral taxa given below. (02 marks)

- i. Order -.....
- ii. Family-.....
- iii. Subfamily.....
- iv. Genus- .....

2.2 List three (03) categories of genetic material of RNA virus families that commonly infect humans giving examples. (06 marks)

RNA genetic material	Example
i.	
ii.	
iii.	

2.3 Describe two (02) main mechanisms of infection of a host cell by a bacteriophage.

(02 marks)

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

(Total: 10 Marks)

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3. A 9-year-old child presented with multiple circular itchy lesions in the chest and abdomen. Dermatophyte infection was suspected in the patient.

3.1 What is the type of dermatophyte infection in this child? (01 mark)

.....

3.2 List three (3) medically important fungi causing dermatophyte infections from different genera. (03 marks)

i.....

ii.....

iii.....

3.3 Name one (01) common site of infection for each fungus listed above in 3.2. (03 marks)

i.....

ii.....

iii.....

3.4 Describe how you would collect a sample for fungal studies from this patient. (03 marks)

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**(Total: 10 Marks)**

4. A 45-year-old patient with leukaemia presented with black necrotic lesions in the upper palate. Invasive fungal sinusitis was suspected in the patient.

4.1 Name two (02) moulds commonly causing invasive infections in respiratory tract.

(02 marks)

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

4.2 How would you differentiate the fungi named in 4.1, based on microscopic features.

(04 marks)

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4.3 Describe how you would advise the treating physician on collection and transport of biopsy sample collected from the sinus.

(4 marks)

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**(Total: 10 Marks)**

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

1. Describe the principles/modes of actions of antiviral drugs giving examples for each of these. **(15 marks)**

2. Blood culture from a patient with leukaemia in ICU flagged positive. Gram stain showed budding yeast with pseudo hyphae.

How will you proceed with the identification of the yeast? The following information should be included.

The tests that would be done for identification.  
Findings for one species of yeast for each test.

**(15 marks)**

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