

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
NO BOOK TEST

DURATION: 1 ½ HOURS

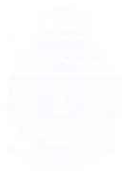
DATE: 13TH DECEMBER 2022

TIME: 9.00 AM – 10.30 AM

REGISTRATION NO:

IMPORTANT INSTRUCTIONS/ INFORMATIONS TO CANDIDATES

- This question paper consists of 11 pages with 10 Multiple Choice Questions (Part A), 04 Structured Essay Questions (Part B) and 01 Essay Question (Part C).
- Write your registration number in the space provided.
- Answer **all** questions.
- **Multiple choice questions (Part A):** indicate the best answer for each question, in the answer sheet provided by placing a cross (x) in **ink** in the relevant cage. (answers in pencil will **not** be marked)
- **Structured essay questions (Part B):** write answers within the space provided.
- **Essay question (Part C):** write the answer in the booklet provided.
- Do not remove any page/part of this question paper from the examination hall.
- Mobile phones and any other electronic equipment are **NOT** allowed. Leave them outside.



Address:

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PART B – Structured Essay Questions (80 Marks)

1.0 Viruses share several common characteristics that are not seen in other living microorganisms.

1.1. State two (02) living and two (02) non-living characteristics of viruses. (04 marks)

Living characteristics

i.

ii.

Non-living characteristics

iii.

iv.

1.2 Draw a common structure of a virus and label the following components. (05 marks)

A – Viral genome

B – Capsid

C – Nucleocapsid

D – Envelope

E – Spikes

1.3 State one (01) function of each of the following viral components. (03 marks)

Component	Function
Viral genome	
Capsid	
Envelope	

1.4 Explain the main steps of replication cycle of viruses using a flow chart. (08 marks)

(Total: 20 Marks)

2.0 Human enteric viruses are primarily transmitted by contaminated food or water. They are the commonest causes of nonbacterial gastroenteritis worldwide.

2.1. What are “enteric viruses”? (02 marks)

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2.2. List the laboratory diagnosis methods of rotavirus infections. (04 marks)

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

2.3. Outline the techniques that are used to detect the growth of a virus in cell cultures. (06 marks)

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2.4. Briefly explain the importance of IgM and IgG antibodies for identification of acute/recent viral infection, primary viral infection, past viral infection, and immunization against a virus. (08 marks)

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3.0 Fungi are diverse in their reproduction. Their reproduction takes place either by asexually or sexually or both.

3.1 List three (03) basic modes of reproduction seen in fungi. (03 marks)

- i.
- ii.
- iii.

3.2 Mention two (02) examples for the each of mode of reproduction you mentioned in 3.1. (06 marks)

	Example 01	Example 02
i.		
ii.		
iii.		

3.3 Compare the asexual and sexual reproduction methods in fungi. (06 marks)

Asexual reproduction	Sexual reproduction

3.4 List five (05) common features of fungal cell structure. (05 marks)

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

(Total: 20 Marks)

4.0 Fungal infections can be broadly classified based on the site of infection.

4.1. Compare the superficial and cutaneous mycoses in human. (06 marks)

Superficial mycoses	Cutaneous mycoses

4.2 Briefly describe the “Dermatophytes” fungi. (04 marks)

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4.3 List the three (03) major types of dermatophytes that cause infections in human and give one (01) example species for each type. (06 marks)

Type of dermatophytes	Example species

4.4 Define the following fungal infections.

(04 marks)

a) Endothrix fungal infections

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b) Ectothrix fungal infections

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(Total: 20 Marks)

PART C – Essay Question (10 marks)

1. Discuss the laboratory diagnosis methods of dermatophytosis.

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ANSWER SHEET FOR PART A

1.

a	b	c	d
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2.

a	b	c	d
---	---	---	---

3.

a	b	c	d
---	---	---	---

4.

a	b	c	d
---	---	---	---

5.

a	b	c	d
---	---	---	---

6.

a	b	c	d
---	---	---	---

7.

a	b	c	d
---	---	---	---

8.

a	b	c	d
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9.

a	b	c	d
---	---	---	---

10.

a	b	c	d
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1. a b c

2. a b c

3. a b c

4. a b c

5. a b c

6. a b c

7. a b c

8. a b c

9. a b c

10. a b c