



UNIVERSITY OF RUHUNA – FACULTY OF ALLIED HEALTH SCIENCES

DEPARTMENT OF PHARMACY

SECOND BPHARM PART I EXAMINATION – MARCH/APRIL 2021

PH 2153 PHARMACEUTICAL MICROBIOLOGY – SEQ

TIME: TWO HOURS

INSTRUCTIONS

- There are **four** questions in parts **A, B, C, D** and **E** in this SEQ paper.
- Answer all questions.
- No paper should be removed from the examination hall.
- Do not use any correction fluid.
- Use illustrations where necessary.

PART A

01.

- 1.1 Draw and label a typical bacterial cell. *(10 marks)*
- 1.2 State five general features of host-parasite relationship. *(20 marks)*
- 1.3 Briefly explain bacterial virulence factors. *(20 marks)*
- 1.4 Briefly outline the diagnostic methods of bacteria. *(20 marks)*
- 1.5 List four factors determining the effectiveness of disinfectants. *(10 marks)*
- 1.6 Briefly explain the methods used for sterilization. *(20 marks)*

PART B

02.

- 2.1 Name two non-enveloped medically important DNA viruses. *(10 marks)*
- 2.2 Write two enveloped medically important RNA viruses. *(10 marks)*
- 2.3 List seven basic steps of viral replication and two life cycles, which are used by viruses to replicate. *(20 marks)*
- 2.4 Mention two commonly used techniques/assays to detect viruses. *(10 marks)*
- 2.5 Write a short note on “Viroids”. *(20 marks)*
- 2.6 Briefly explain the symptoms, microbiological investigations, treatment choices and preventive measures of fungal nail infections. *(30 marks)*

PART C

03.

- 3.3 Mention two culture media used for sterility testing of a pharmaceutical product. (10 marks)
- 3.4 Briefly explain the “media suitability test”. (25 marks)
- 3.5 Explain the technique of membrane filtration method used to for sterility testing. (30 marks)

PART D

04. \

4.1

- 4.1.1 State two intestinal nematodes who live in the small intestine. (05 marks)
- 4.1.2 State the infective stage of these parasites separately. (05 marks)
- 4.1.3 State two parasites which cause malaria in Sri Lanka. (05 marks)
- 4.1.4 State four parasitic infections associated with HIV infection. (10 marks)
- 4.1.5 Briefly discuss the factors that contribute to the spread of parasitic infections in Sri Lanka. (25 marks)

PART E

4.2

- 4.2.1 List five mechanism of action of antimicrobial drugs. (10 marks)
- 4.2.2 Briefly describe the resistance mechanisms of antimicrobials. (15 marks)
- 4.2.3 Describe the two diffusion methods commonly used to test the antibiotic sensitivity of an isolated pathogenic bacteria. (25 marks)

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