

UNIVERSITY OF JAFFNA, SRI LANKA  
FACULTY OF ALLIED HEALTH SCIENCES  
SECOND YEAR FIRST SEMESTER EXAMINATION IN BPharmHons-2021  
PHAPM 2144 PHARMACEUTICAL MICROBIOLOGY

Date: 30. 01. 2023

Time: 03 hours

**ANSWER ALL SIX QUESTIONS**

1.

- 1.1. Name two (02) DNA viruses and RNA viruses. (05 Marks)
- 1.2. List five (05) characteristics that differentiate viruses from other living organisms. (20 Marks)
- 1.3. Briefly outline the morphology of COVID-19 Virus. (20 Marks)
- 1.4. Describe the stages of one-step growth curve of viruses. (25 Marks)
- 1.5. Explain the potential clinical outcomes of a viral infection with suitable examples (30 Marks)

2.

- 2.1. List the methods used for enumeration of microorganisms. (15 Marks)
- 2.2. Give the microorganisms and the standard growth media recommended for the growth promotion test. (20 Marks)
- 2.3. List the mechanisms through which bacteria acquire resistance against antibiotics with an example for each. (20 Marks)
- 2.4. Briefly explain the disk diffusion assay method for evaluating the antimicrobial susceptibility of microorganisms. (20 Marks)
- 2.5. Describe the role of a pharmacist in minimizing antimicrobial resistance. (25 Marks)

3.

- 3.1. List five (05) observable effects of microbial spoilage of pharmaceuticals with an example for each. (15 Marks)
- 3.2. Define the following terms:
- 3.2.1. Preservation. (05 Marks)
- 3.2.2. Sterilization. (05 Marks)
- 3.3. List the ideal properties of preservatives used in pharmaceuticals. (20 Marks)
- 3.4. Briefly explain heat sterilization methods in microbiology. (25 Marks)
- 3.5. Describe the preservative efficacy testing of pharmaceuticals. (30 Marks)

4. Write an account on
- 4.1. Limulus Amebocyte Lysate (LAL) Assay. (20 Marks)
  - 4.2. Live attenuated vaccines. (20 Marks)
  - 4.3. Dermatophytosis. (20 Marks)
  - 4.4. Environmental monitoring in pharmaceutical manufacturing. (40 Marks)
- 5.
- 5.1. Define the term “Nosocomial infection”. (05 Marks)
  - 5.2. Name five (05) microorganisms associated with nosocomial infections. (15 Marks)
  - 5.3. List three (03) portals of entry for bloodborne infectious agents. (15 Marks)
  - 5.4. Briefly describe the clinical consequences of parasitic infections (25 Marks)
  - 5.5. Describe the different modes of transmission of parasitic diseases with suitable examples. (40 Marks)
- 6.
- 6.1. Name five intestinal parasites in human. (20 Marks)
  - 6.2. Name the parasite that causes itching in the anal area (pruritis ani) in human (10 Marks)
  - 6.3. Briefly describe a suitable method for diagnosis of the infection caused by the parasite mentioned in 6.2. (20 Marks)
  - 6.4. Briefly explain the difficulties in treating a patient infected with the parasite mentioned in 6.2. (20 Marks)
  - 6.5. Describe the prevention and control measures for the infections caused by the parasite mentioned in 6.2. (30 Marks)

Allied health sciences