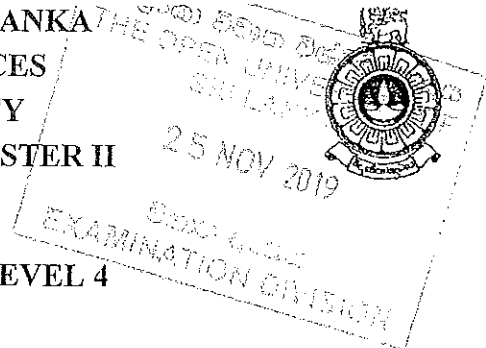


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THE OPEN UNIVERSITY OF SRI LANKA  
FACULTY OF HEALTH SCIENCES  
DEPARTMENT OF PHARMACY  
ACADEMIC YEAR 2018/2019 – SEMESTER II



BACHELOR OF PHARMACY HONOURS  
FMU4306- PHARMACEUTICAL MICROBIOLOGY II- LEVEL 4  
FINAL EXAMINATION  
DURATION: 03 HOURS

DATE: 25.11.2019

TIME:9.30 A.M.- 12.30 P.M.

Part - B (20 marks)

There are two (02) Short Answer Questions. Answer all.

1.  
1.1 List two (02) types of vaccines used for active immunization giving one (01) example for each. (04 marks)

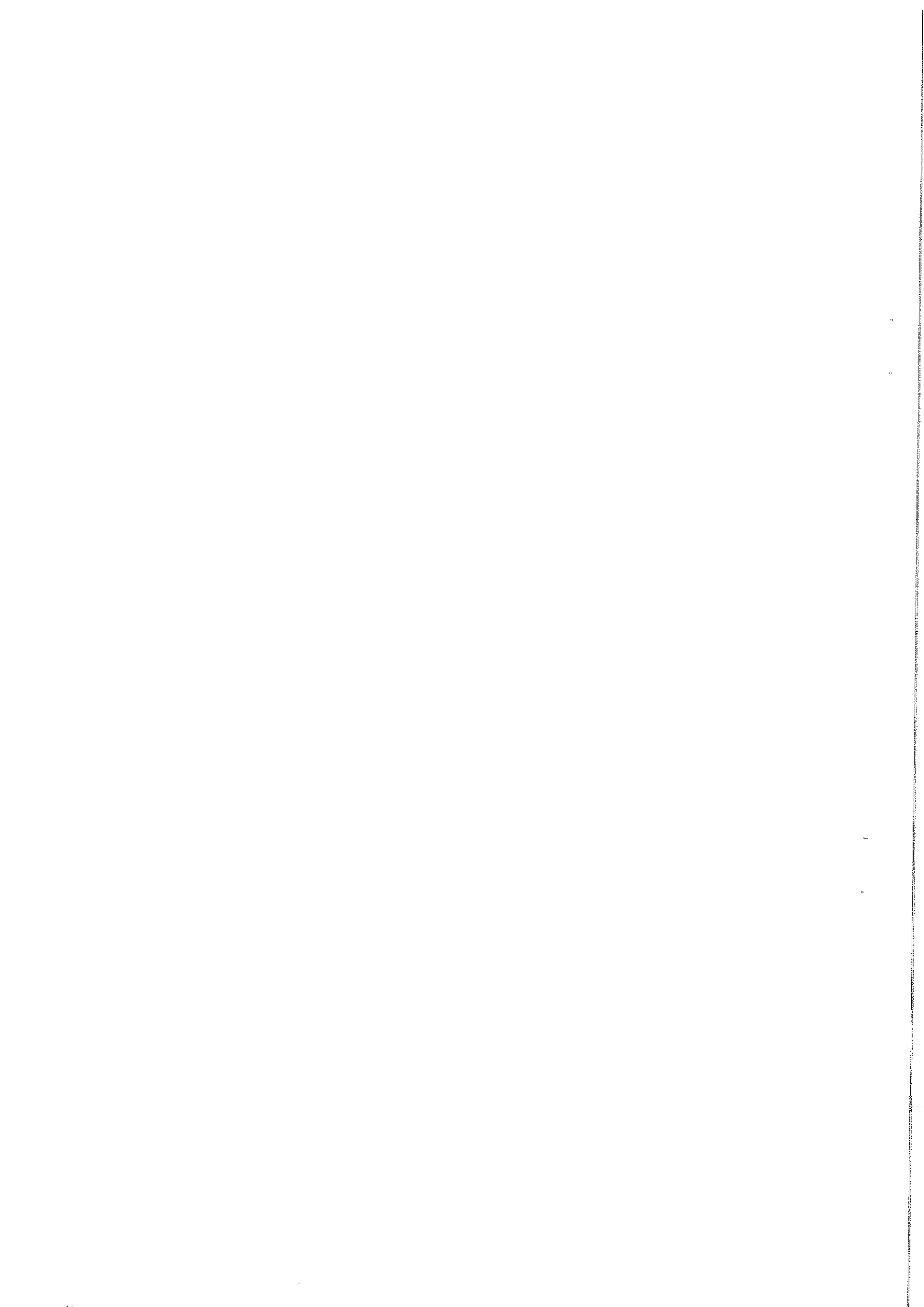
I.....  
Example:.....  
II.....  
Example:.....

1.2 List three (03) vaccines in 'recommended schedule for Expanded Programme of Immunization (EPI) of Sri Lanka'. (03 marks)

I.....  
II.....  
III.....

1.3 Briefly explain the term 'secondary immune response' in vaccination. (03 marks)

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Index No.....

2.

2.1 List two (02) major uses of serological tests (i.e. tests that involve antigen-antibody reactions). (02 marks)

I.....  
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II.....  
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2.2 List two (02) commonly used serological tests. (02 marks)

I.....

II.....

2.3 List two (02) examples for 'antigen presenting cells' in adaptive immunity. (02 marks)

I.....

II.....

2.4 State the difference between 'naturally acquired active immunity' and 'artificially acquired passive immunity' with examples. (04 marks)

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**Part - C (60 marks)**

There are four (04) Structured Essay Questions (SEQs). Answer all.

1.
  - 1.1 List four (04) sources of microbial contamination of pharmaceutical products. (02 marks)
  - 1.2 Briefly explain the measures that can be taken to control contamination from two (02) of the sources you mentioned above in 1.1. (08 marks)
  - 1.3 Briefly explain the reasons for adding preservatives to pharmaceutical products. (05 marks)
  
2.
  - 2.1 Give one (01) example for a protozoan parasite causing malaria. (02 marks)
  - 2.2 List the two (02) morphological forms of protozoan parasites. (01 mark)
  - 2.3 Mention the infective stages of malaria parasite. (04 marks)
  - 2.4 Briefly explain the life cycle of malarial parasite inside the human host. (08 marks)
  
3.
  - 3.1 Illustrate the basic structure of an antibody. (03 marks)
  - 3.2 State the four (04) types of T lymphocytes with their role in adaptive immunity. (04 marks)
  - 3.3 Briefly explain the mechanisms by which an antibody makes an antigen harmless. (08 marks)

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4.

4.1 List two (02) differences in the production process of a live attenuated bacterial vaccine and a live attenuated viral vaccine. (02 marks)

4.2 Write a short note on antisera. (03 marks)

4.3 Briefly explain the concept of 'herd immunity'. (02 marks)

4.4 Explain the events that may occur in humoral immune response to an injection of a live attenuated bacterial vaccine. (Assume the antigen is T cell dependent). (08 marks)

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