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

DATE: 28TH SEPTEMBER 2022 TIME: 9.30 A.M.- 12.30 P.M.

Part B- Short Answer Questions – SAQs (20 marks)

1.

1.1 Define the term "epitope". (02 marks)

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1.2 What is meant by following tests.

I. Sensitivity of a serological test (01 mark)

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I. Specificity of a serological test (01 mark)

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1.3 Name two (02) soluble antigen-antibody reaction assays. (02 marks)

I. .....

II. .....

1.4 State the tests in qualitative and quantitative procedures of carrying out the agglutination reaction. (02 marks)

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1.5 Name two (02) viruses that are capable of showing positive results in the haemaglutination Inhibition assay. (02 marks)

I. .....

II. .....

Index No: .....

2.

2.1 State four (04) chief compositional factors that influence microbial activity/growth in pharmaceutical products. (02 marks)

I. .....

II. .....

III. .....

IV. .....

2.2 Give two (02) determinants of oxidation-reduction potential of a substrate which influence the type of organisms growing on it. (01 mark)

I. .....

II. .....

2.3 Define the following terms.

I. Bactericidal (01 mark)

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II. Bacteriostatic (01 mark)

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2.4 What are "pyrogens"? (02 marks)

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2.5 Name one (01) change in the appearance of each of the following products, brought about by microorganisms. (03 marks)

Solutions and mixtures - .....

Syrups - .....

Emulsions - .....

Index No: .....

Part C- Structured Essay Questions – SEQs (60 marks)

1.

1.1 Under the zoning concept of a factory, give one (01) area each suitable for the following zones. (03 marks)

I. Black zones
II. White zones
III. Grey zones

1.2 Give four (04) important information of a cleaning /disinfecting agent which should be included in the procedure of cleaning and disinfection policy. (02 marks)

1.3 Name four (04) categories of disinfectants. (02 marks)

1.4 Explain the importance of microbiological monitoring program and personal hygiene with regard to the principles of factory hygiene. (08 marks)

2.

2.1 Define the term "antisera/sera". (01 mark)

2.2 State four (04) objectives of "National Immunization Programme" in Sri Lanka. (02 marks)

2.3 Briefly explain the term "immunoprophylaxis" and how to achieve it. (04 marks)

2.4 Describe the preventive measures and the immunization programme directed towards the prevention of the spread of tuberculosis. (08 marks)

3.

3.1 Define the term "hypersensitivity". (01 mark)

3.2 State the four (04) types of hypersensitivity reactions according to the Gell and Coombs classification. (02 marks)

3.3 State the two (02) main types of immunodeficiency diseases and give two (02) examples each. (04 marks)

3.4 Autoimmune diseases can be classified mainly into 2 types as organ specific and systemic diseases. Explain this using the autoimmune diseases myasthenia gravis and systemic lupus erythematosus. (08 marks)

Index No: .....

4.

4.1 State three (03) sources of microbial contamination in pharmaceutical products. (03 marks)

4.2 What purpose does a carbon filter serves in a water treatment system? (01 mark)

4.3 Give a drawback experienced by having carbon filter in a water purification system? (01 mark)

4.4 Briefly explain three (03) different processes by which water is prepared for pharmaceutical manufacturing. (10 marks)