THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF PHARMACY
THE ACADEMIC YEAR 2022/2023 – SEMESTER II

BACHELOR OF PHARMACY HONOURS
FMU3204- PHARMACEUTICAL MICROBIOLOGY I - LEVEL 3
FINAL EXAMINATION
DURATION: TWO (02) HOURS

DATE: 08TH SEPTEMBER 2023 **TIME: 9.30 A.M.- 11.30 A.M.**

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Part B - Short Answer Questions (SAQ) -20 Marks

1.

1.1. What are plasmids? (03 marks)

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1.2 State the three (03) ways of gene transfer from one bacteria to another bacteria. (03 marks)

I. .....

II.....

III.....

1.3. Name three (03) types of associations exist between organisms. (03 marks)

I.....

II.....

III.....

1.4. Name the following organism. (01 mark)

I. Organisms that show optmium growth in low temperature - .....

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2.

2.1. Define the term microbial growth. (03 marks)

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2.2. What is "Generation Time" with regard to bacterial growth. (03 marks)

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2.3. Draw the bacterial growth curve and name the main four (04) phases. (04 marks)

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Part C - Structured Essay Questions (SEQ) – 60 Marks

Answer all questions.

1.

1.1. List the three (03) factors that vary among different antibiotics. (03 marks)

1.2. What is a "Broad Spectrum Antibiotic"? (05 marks)

1.3. Briefly explain "Acquired Resistance". (05 marks)

1.4 Write the two (02) situations that antibiotic assays are being used. (02 marks)

1.5 What is the principle behind the microbiological assay of antibiotics by agar diffusion method? Outline the procedure for such an assay. (15 marks)

2.

2.1. Define the term "Disinfection". (05 marks)

2.2. Write five (05) Desirable qualities of an ideal disinfectant/antiseptic. (05 marks)

2.3. What are the three (03) main categories used as chemical microbial control? (03 marks)

2.4. Write a brief account on physical agents that are used for controlling microbial growth. (10 marks)

2.5. Write short notes on the mode of action and application of below chemical agents that are used as disinfectants/ antiseptic agents. (07 marks)

I. Phenol and phenolic compounds

II. Alcohol