



University of Ruhuna- Faculty of Technology
Bachelor of Biosystems Technology
Level 1 (Semester II) Examination, November/December 2025
Academic year 2023/2024

Course Unit: BST 1262 - Basic Microbiology (Theory) -Repeat

Duration: 1 hour and 30 minutes



Please read and follow the **instruction** carefully before answering the questions.

- Answer **All Two (2)** questions in **PART 1** in the given space.
- Answer Only **Two (2)** questions in **PART 2**.
- Use separate book for answering the questions in **PART 2**.
- Each question should be started with a new page.
- Calculators and mobile phones are not allowed

PART 1 – Answer All questions

Question 01

A fungus is defined as any member of the group of eukaryotic organisms that includes microorganisms such as yeasts and molds, as well as the more familiar mushrooms.

- I. Mention two (02) reasons for **not classifying** fungi under kingdom Plantae (20 Marks).

.....

.....

.....

.....

- II. Point out the main difference/s between nutrient uptake methods of kingdom Animalia and kingdom Fungi (20 Marks).

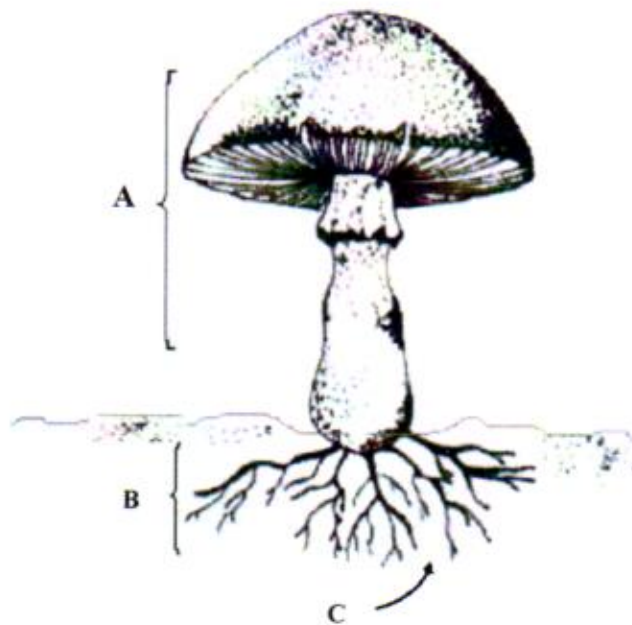
.....

.....

.....

.....

- III. Identify A, B and C (30 marks).



.....
.....
.....

IV. Write down the main steps of the reproductive cycle of fungi **(30 marks)**.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

Question 02

I. Point out **four (04)** major studying areas found commonly under food microbiology **(12 Marks)**.

.....
.....
.....
.....
.....

II. Fill out the following table with **one (01) characteristic, one (01) Symptom, one (01) food item** reference to the food pathogens **(48 Marks)**.

Food pathogen	Characteristics	Symptoms	Foods
<i>Clostridium botulinum</i>			
<i>Salmonella sp.</i>			
<i>E. coli</i>			
<i>Vibrio cholerae</i>			

III. Differentiate the processes of lactic acid fermentation and alcoholic fermentation **(20 Marks)**.

.....

.....

.....

.....

IV. Point out the main difference between homofermentative lactic acid bacteria and heterofermentative lactic acid bacteria **(20 Marks)**.

.....

.....

.....

.....

PART 2 – Answer two (02) questions only

Question 01 (100 Marks)

- I. Diagrammatically illustrate the growth curve of microbial lab culture with its main phases **(10 Marks)**.
- II. Point out the main **two (02)** characteristics of above mentioned each growth stage **(20 Marks)**.
- III. Mention **five (05)** factors affect for the bacterial growth **(10 Marks)**
- IV. Briefly explain the effect of above-mentioned factors on bacterial growth **(60 Marks)**.

Question 02 (100 Marks)

- I. Differentiate the “cidal agents” and “static agents” with reference to the controlling of micro-organisms **(10 Marks)**.
- II. Point out **four (04)** types of antimicrobial agents with two (02) examples in each category **(30 marks)**.
- III. Write a brief account on the physical methods that can be used to control micro-organisms **(60 Marks)**.

Question 03 (100 Marks)

Write down short notes on followings

- I. Microorganisms as biofertilizers **(20 Marks)**
- II. Classification of protozoans **(20 Marks)**
- III. Effects of osmosis on bacterial cell **(20 Marks)**
- IV. Binary fission Vs. budding **(20 Marks)**
- V. Bacterial cell arrangement **(20 marks)**

.....End of the paper.....