

KATHMANDU UNIVERSITY
End Semester Examination
May/June, 2022

Level : B.Sc./B.Tech.
Year : II
Time : 2 hrs. 30 mins.

Course : BIOL 207
Semester : II
F.M. : 55

SECTION "B"

(Long Answer Questions)
[3Q. × 6 = 18 marks]

Attempt **ANY THREE** questions.

1. Define Cellular Respiration. Describe the Glycolysis process in detail with diagram. [1+5]
2. Discuss Gram-positive and Gram-negative bacteria in terms of their Cell-Wall composition with diagram.
3. Define Bacterial Conjugation. Describe the mechanism of F+ × F- Plasmid conjugation with diagram. [1+5]
4. Discuss Robert Koch's experiment with its postulates and limitations.

SECTION "C"

(Short answer questions)
[4Q. × 5 = 20 marks]

5. Discuss the structure and function of Flagella in prokaryotes.
6. Define Bacteriophage. Differentiate Lytic and lysogenic life cycle of Bacteriophage.
7. Define bacterial growth. Discuss the different phases of bacterial growth curve with diagram.
8. List any five characteristics of Fungi. Define Mycoses and give the clinical classification of Fungi based on Mycoses.

SECTION "D"

9. Give differences between (**ANY THREE**): [3Q. × 4 = 12 marks]
 - a. Prokaryotic Cell and Eukaryotic Cell
 - b. Virions and Prions
 - c. Yeast and Mold
 - d. Batch Culture and Continuous Culture
10. Give reasons **WHY/HOW** for (**ANY TWO**): [2Q. × 2.5 = 5 marks]
 - a. Endospores offer survival advantages to microorganisms.
 - b. 70% Ethanol is an effective disinfectant than 100% Ethanol.
 - c. Indicator bacteria like coliform are used to test potability of drinking water.

