UNIVERSITY OF THE PUNJAB

B.S. 4 Years Program : Third Semester – Spring 2023

Paper: Botany-III (Cell Biology, Genetics and Evolution)

Course Code: BOT-201

Roll No.

Time: 3 Hrs. Marks: 60

THE ANSWERS MUST BE ATTEMPTED ON THE ANSWER SHEET PROVIDED

Q.1. Answer the following short questions:

(10x3=30)

- I. What is peptide bond? Show peptide bond between glycine and alanine amino acids.
- II. What is transduction?
- III. What is difference between amylose and amylopectin?
- IV. What is difference between purines and pyrimidines?
- V. State law of independent assortment.
- VI. Differentiate between autopolyploidy and allopolyploidy.
- VII. What is meant by acquired characters?
- VIII. What are peroxisomes? Write their functions.
 - IX. What is difference between active transport and passive transport?
 - X. What is meant by mutation? Enlist different types of gene mutations.

Q.2. Answer the following questions.

(3x10=30)

- I. a) Explain structure of chloroplast.
 - b) Explain lac operon.
- II. a) Write note on Mendel's law of segregation.
 - b) What are lipids? Write structure of triglyceride.
- III. a) What is crossing over? What is its importance?
 - b) What are different functions of plasma membrane.