BOARD OF INTERMEDIATE EDUCATION

SENIOR INTER BOTANY

MODEL PAPER (ENGLISH VERSION)

TIME: 3 Hours **Max. Marks: 60**

SECTION – A

I. **i) All are very short answer type questions.**

ii) Answer ALL the questions.

iii) Each question carries TWO marks. **10 × 2 = 20**

1. Compare the pH of guard cells during the opening and closing of stomata.

2. What is the primary acceptor of CO_2 in C_3 plants? What is first stable compound formed in Calvin cycle?

3. What is transformation? Who discovered it and in which organism?

4. Explain the terms phenotype and genotype.

5. Define stop codon. Write the codons.

6. Write any two chemical differences between DNA and RNA.

7. What are molecular scissors? Where are they obtained from?

8. What is GEAC and what are its objectives?

9. What is meant by biofortification?

10. What is meant by hidden hunger?

SECTION – B

II. **i) Short answer type questions.**

ii) Answer any SIX from the following.

iii) Each question carries FOUR marks. **6 × 4 = 24**

11. Transpiration is a necessary evil. Explain.

12. Explain the steps involved in the formation of root nodule.

13. Explain briefly about enzyme inhibitors.

14. Write any four physiological effects of cytokinins in plants.

15. Explain the structure of TMV.

16. Write a note on chromosomal mutations and gene mutations.

17. Write the important features of Genetic code.

18. List out the beneficial aspects of transgenic plants.

SECTION – C

III. i) Long Answer type questions

ii) Answer any TWO questions

iii) Each question carries EIGHT marks **2 × 8 = 16**

19. Give an account of glycolysis. Where does its occur? What are the end products? Trace the fate of these products in both aerobic and anaerobic respiration.

20. Give a brief account of the tools of recombinant DNA technology.

21. You are a Botanist working in the area of plant breeding. Describe the various steps that you will undertake to release a new variety.