

B. Sc. (Honours) Examination, 2019
Semester - IV
Botany
Paper- BBA-41 (Allied)
(Plant Physiology, Biochemistry, Cell Biology, Genetics & Plant Breeding)
(For Back Candidates)

Time: 3 hours

Full Marks: 40

Questions are of value as indicated in the margin

1. Answer in brief **any eight** questions: 1×8=8
 - a) Write down the names of one natural and one synthetic auxin.
 - b) Name a protein with secondary structure.
 - c) What is nucleoside?
 - d) What is euchromatin?
 - e) What is dihybrid cross?
 - f) Define test cross.
 - g) What is osmotic pressure?
 - h) What is action spectrum?
 - i) Define autosome.
 - j) What is hybrid vigour?

2. What are C₃ plants? Write down the steps in Calvin cycle with associated enzymes. 1+7=8

OR

Define transpiration. What are the different types of transpiration? Write down briefly about external factors which affect transpiration. 1+4+3=8

3. Explain nucleosome model with suitable diagram. 8

OR

Describe in brief the process of translation in prokaryotes. 8

4. What are the different types of hybridization? Describe the process of emasculation in plant breeding. 3+5=8

OR

State the law of segregation. How will you demonstrate it with the help of a monohybrid cross? 2+6=8

5. Write short notes on **any two** of the following. 4×2=8
 - a) Seven pairs of contrasting traits of pea plants selected by Mendel.
 - b) Role of auxin on cell elongation.
 - c) Deficiency symptoms of one macronutrient and one micronutrient.
 - d) Role of phytochrome in flowering.
