

Agriculture and Forestry University
Office of the Controller of Examinations
Rampur, Chitwan
2079, Bhadra

Faculty	Agriculture		
Exam	Regular		
Level	Bachelor	Full Marks	40
Program	B. Sc. Ag.	Pass Marks	16
Year and Semester	1 st Year 2 nd Semester	Time	2:00 hrs.

Subject : PPH 101, 3(2+1) Introductory Crop Physiology

Candidates are required to give their answers in their own words as far as practicable. All questions carry equal marks. Answer any 10 questions.

1. Illustrate the structure and functions of chloroplast and mitochondria. (2+2=4)
2. Explain the pathways of water movement in roots. Also write the difference between active and passive absorption of water. (3+1=4)
3. Describe the mechanism of absorption of mineral ions by plant. (4)
4. Define photosynthesis. Show the different steps of photophosphorylation. (1+3=4)
5. Show the steps of TCA cycle. Also mention the importance of vitamins in this metabolism. (3+1=4)
6. Describe the metabolic changes that occur during seed germination. (4)
7. Write down the structure and functions of Abscisic acid in plants. (4)
8. Define photoperiodism. Write about any two theories which describe the mechanism of photoperiodism. (1+3=4)
9. Draw the structure of phloem anatomy. Differentiate between source and sink. (2+2=4)
10. Define respiratory quotient. Mention the condition where RQ becomes zero, infinite and one. (1+3=4)
11. Write short notes on:
 - a. Substrate level phosphorylation (2+2=4)
 - b. Factors affecting transpiration

GOOD LUCK