



Agrotechnology Discipline
Khulna University, Khulna
1st Year Term-I, Examination 2025
0811 08 AT 1101: Fundamentals of Agronomy
Full Marks: 60, Time: 3 hours, Credit: 03

- The FIGURES in the right margin indicate full marks. The questions are of equal value.
- Use separate sheets for each section.
- There are **FOUR** questions in each section, answer any **THREE** questions from each.

Section A

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| 1. | (a) Differentiate agronomic crops from horticultural crops. Write the scope of agronomy. [L1, L2; CLO2] | 2+2=4.0 |
| | (b) Write down the basic principles of agronomy. [L1; CLO2] | 3.0 |
| | (c) Describe the evolutionary sequence of present agriculture in Bangladesh. [L2; CLO2] | 3.0 |
| 2. | (a) What is thermoperiodism? Differentiate the types of thermoperiodism. [L, L2; CLO1] | 3.0 |
| | (b) 'Relative humidity affects leaf growth, photosynthesis, and pollination.' Explain. [L2; CLO1] | 3.0 |
| | (c) What is microclimate? 'Study on microclimate is important.' Justify. [L1, L5; CLO1] | 3.0 |
| | (d) What is cardinal temperature? [L1; CLO1] | 1.0 |
| 3. | (a) 'Sunlight influences the crop growth and development.' Explore. [L4; CLO1] | 2.5 |
| | (b) Classify crops on the basis of cropping season. Give their characteristics. [L2; CLO2] | 3.0 |
| | (c) Explain the followings: i) Catch crops, ii) Cover crops, iii) Relay crops. [L2; CLO2] | 3×1.5=4.5 |
| 4. | (a) When an element is considered as essential? [L1; CLO3] | 2.0 |
| | (b) Classify the essential nutrient on amount of requirement. [L2; CLO3] | 2.0 |
| | (c) Compare the deficiency symptoms in plants between the followings i) Iron and manganese, ii) Nitrogen and magnesium. [L2; CLO3] | 2+2=4.0 |
| | (d) Write two important functions of nitrogen and phosphorus. What changes will you find in the plant when these elements are excess in soil? [L1; CLO3] | 2.0 |

Section B

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| 5. | (a) Differentiate tillage from tith. [L2; CLO4] | 2.0 |
| | (b) Classify tillage with two implements used in each tillage classification. [L3; CLO4] | 3.0 |
| | (c) Define minimum tillage. Do you think that the minimum tillage is beneficial to conserve soil health? Justify. [L1, L5; CLO4] | 3.0 |
| | (d) 'Seed-cum-fertilizer drill is effective over conventional tillage.' Support. [L5; CLO4] | 2.0 |
| 6. | (a) 'Manures are different from fertilizers.' Elaborate. [L2; CLO3] | 2.0 |
| | (b) 'Continuous use of urea fertilizer makes the soil acidic.' Explain it with reason. [L4; CLO3] | 2.0 |
| | (c) Name the commonly used fertilizers in Bangladesh with their chemical formula and percent nutrient present in them. [L2; CLO3] | 3.0 |
| | (d) 'Supply of organic materials with high C:N ratio results in poor growth of crop.' Support your answer. [L5; CLO3] | 3.0 |
| 7. | (a) Name the methods of sowing. Name the advantages and disadvantages of broadcasting method. [L1; CLO4] | 1.5+2.5=4.0 |
| | (b) 'All plants are not suitable for transplanting.' Support your opinion. [L2; CLO4] | 2.0 |
| | (c) What are the points to be considered to select a place for preparing nursery bed? Write the advantages of raising seedling in nursery bed. [L2, L1; CLO5] | 2+2=4.0 |
| 8. | (a) What is intercultural operation? What intercultural operations will you suggest for sugarcane? Elaborate their functions. [L1, L2; CLO5] | 4.0 |
| | (b) What is mulching? Write down the benefits of mulching. [L1; CLO5] | 3.0 |
| | (c) Name two water saving irrigations. Write their disadvantages. [L2, L1; CLO5] | 1+2=3.0 |

[L1-Remember, L2-Understand, L3-Apply, L4-Analyze, L5-Evaluate, L6-Create]