

Daffodil International University

Department of Agricultural Science

Faculty of Agriculture

BSc. in Agricultural Science

Final Examination-Spring 2026

Course Code: 0821-1201

Level and Term: 1-2

Time: 2 hours

Section: A,B & C

Course Title: Principles of agroforestry

Course Teacher Initials: DMM, MSJ, MHH

Total Marks: 40

Splitting any answer is strictly prohibited

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|---|--|---------------|-------|
| 1 | (a) Describe the Shifting cultivation. <u>Write down</u> the major benefits of Shifting cultivation. | CLO3, PLO1 C2 | 2+2 |
| | (b) Explain the <u>Taungya practice</u> and its suitability in agroforestry system. Show the <u>difference</u> between Shifting cultivation and Taungya practice. | CLO3, PLO1 C2 | 2+2 |
| 2 | (a) <u>List</u> both <u>positive</u> and <u>negative</u> effects involve in <u>Tree – crop interface</u> (TCI) and <u>Tree – animal interface</u> (TAI). | CLO3, PLO1 C1 | 2+2 |
| | (b) Apply the principles of ' <u>nutrient cycling</u> ' in TCI and ' <u>shade effect</u> ' in TAI that maximizes crop yield with examples. | CLO3, PLO1 C3 | 4 |
| 3 | (a) Explain SALT, Coppicing, Pollarding practice for agroforestry system management. | CLO4, PLO1 C3 | 2+1+1 |
| | (b) Build a note with describing the techniques, advantages and limitation of artificial tree regeneration (ATR) used in Agroforestry system. | CLO4, PLO1 C3 | 4 |
| 4 | (a) Discover the concept of Cropland agroforestry and discuss the traditional cropland agroforestry practices in Bangladesh. | CLO5, PLO1 C4 | 4 |
| | (b) Define homestead agroforestry. Explain the importance and stratum of homestead agroforestry with suitable example. | CLO5, PLO1 C5 | 4 |
| 5 | (a) List the common timber and non-timber forest products (NTFPs) found in agroforestry systems and outline the basic steps involved in their harvesting and processing. | CLO6, PLO1 C1 | 4 |
| | (b) Construct a cropping plan for a 1-hectare plot using an agroforestry system that aims for an LER of 1.5. Specify the tree and crop species you would select and justify how their complementary resource use leads to this increased efficiency. | CLO5, PLO1 C3 | 4 |