

U.G. 1st Semester Examination - 2025**BOTANY****[Skill Enhancement Course (SEC)]****Course Code : BOT-SEC-T-01 (A & B)****[NEP-2020]****Full Marks : 25****Time : 1½ Hours***The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***Answer all the questions from Selected Option.****OPTION - A****BOT-SEC-T-01(A)****(Biofertilizers)****1: Answer any five questions:****1×5=5**

- a) What is inoculant carrier?
- b) What is Hog fuel?
- c) What is nitragin?
- d) Name two earthworm species used in vermicomposting.
- e) Mention two nutrients absorbed better due to AM association.

[Turn over]

- f) What is meant by associative nitrogen fixation?
- g) Why are cyanobacteria important in paddy fields?
- h) Why does excess nitrogen fertilizer reduce BGA growth?

2. Answer any **two** questions: $5 \times 2 = 10$

- a) Discuss the advantages and limitations of organic farming.
- b) Give a flow diagram for the commercial production of biofertilizer.
- c) Name two crops that respond well to *Azotobacter* inoculation. Discuss the role of *Azotobacter* as a biofertilizer. $2+3$
- d) Explain nitrogen fixation mechanism in *Azolla-Anabaena* system. Discuss the role of *Azolla* as a biofertilizer in rice cultivation. $2.5+2.5$

3. Answer any **one** question: $10 \times 1 = 10$

- a) Differentiate ectomycorrhiza and endomycorrhiza. Explain mycorrhizal association and its significance in agriculture. $4+6$
- b) Describe the role of earthworms in breaking down organic wastes. Discuss some factors affecting composting. $6+4$

OPTION - B

BOT-SEC-T-01(B)

(Plant Diversity and Human Welfare)

1. Answer any **five** questions: $1 \times 5 = 5$

- a) What is ecosystem diversity?
- b) Write the full form of NBPGR.
- c) Name the two insitu conservation sites in West Bengal.
- d) What is the Red Data Book?
- e) What is the People's Biodiversity Register?
- f) Name two organizations associated with biodiversity management.
- g) What do you mean by conserving genetic diversity?
- h) Write down the scientific names of two avenue trees.

2. Answer any **two** questions: $5 \times 2 = 10$

- a) Mention the ethical and aesthetic values of biodiversity.
- b) What is biodiversity legislation? How does the legislation support conservation? $2+3$
- c) Name two traditional Indian alcoholic beverage. What is the difference between fermented and distilled beverages. $2+3$

d) Mention the role of forestry in relation to commercial aspects.

3. Answer any one question:

$10 \times 1 = 10$

a) What is agrobiodiversity. Discuss the major causes of loss of agrobiodiversity. $2+8=10$

b) What is timber? What is seasoning of wood? What is difference between sapwood and heartwood? Briefly write on the commercial uses of timber. $2+2+3+3=10$
