

U.G. 1st Semester Examination - 2024**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 Biocomposting?
 - b) Name a plant that can be used for nitrogen supplement in soil.
 - c) Name any one national scheme which promotes organic farming in India.
 - d) What is Green Manuring?
 - e) What is vermiculture?

[Turn over]

- f) What is the difference between manure and compost?
- g) Name one Actinorrhizal symbiotic bacteria?
- h) What is biodegradable waste? Give example.
2. Answer any **two** questions: $5 \times 2 = 10$
- a) How is *Azospirillum* mass multiplication is done? What *Azospirillum* challenges are associated with inoculum production? $4+1$
- b) How the crops response to the *Azotobacter* inoculum? Name two species of *Azotobacter* used as biofertilizer. $3+2$
- c) What is the role of *Anabaena azollae* in the Azolla-Rice association? What are the limitations of using *Azolla* and Cyanobacteria in rice cultivation? $2+3$
- d) Briefly describe the steps of vermicomposting.
3. Answer any **one** question: $10 \times 1 = 10$
- a) Briefly describe the different methods of organic farming practiced in India.
- b) What is mycorrhiza? Discuss the types and taxonomy of mycorrhiza. Briefly discuss the biological role of mycorrhiza. $2+6+2=10$

OPTION - B
BOT-SEC-T-01(B)

(Plant Diversity and Human Welfare)

1. Answer any **five** questions: $1 \times 5 = 5$
- a) What do you mean by the term Genetic diversity?
- b) Name one biodiversity heritage site of West Bengal.
- c) Name one way for valuing biodiversity.
- d) What is the full form of UNESCO?
- e) What do you mean by capacity building?
- f) Name one ornamental plant.
- g) Name a timber yielding plant.
- h) What do you mean by alcoholic beverage?
2. Answer any **two** questions: $5 \times 2 = 10$
- a) Write a short note on 'Biodiversity awareness programmes'. 5
- b) What is agrobiodiversity? Write in brief the different causes and factors of loss of agrobiodiversity. $1+2+2$
- c) Mention the functions of IUCN and NBPGR. What is Biodiversity management? $2+2+1$

- d) What do you know about the commercial importance of fruits and nuts? 5

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

- a) What do you mean by *in situ* and *ex situ* conservation? Give two examples in each case. What is the projected scenario of biodiversity loss? 3+2+5

- b) Name four commercially grown fruit crops in India and their states of cultivation. Briefly discuss the importance of fruits in nutrition and preservation for marketing. 2+2+4+2

- c) Write a short note on the importance of forestry and their utilization. Mention any five commercial uses of forests. 5+5

- d) What are avenue trees? Name three avenue trees and their scientific names. What do you know about the role of avenue trees in relation to human welfare? 2+3+5
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