2019/TDC/ODD/SEM/ BOTSEC-301T/129

TDC (CBCS) Odd Semester Exam., 2019

BOTANY

(3rd Semester) audodalia

Course No.: BOTSEC-301T

(Biofertilizers)

Full Marks: 50
Pass Marks: 20

Time: 3 hours

The figures in the margin indicate full marks for the questions

UNIT-I

1. Answer any three of the following questions:

 $1 \times 3 = 3$

- (a) What is actinorhizal symbiosis?
- (b) What do you mean by mass multiplication?
- (c) Write the significance of biofertilizers.
- (d) Name one bacterium which is used as biofertilizer.

(Turn Over)

5

BOTSEC-3017/129

- 2. Answer any one question of the following:
 - (a) How does Rhizobium help in enriching soil?
 - (b) Write the identifying characters of Rhizobium (1900 - 200 - 200)
- 3. (a) Write a note on the microbes used as biofertilizers.

(arosilization)

(b) Write the methods of isolation of Rhizobium.

esciona the speecha Anta-II off at Security state

- 4. Answer any three of the following questions: 1×3=3
 - (a) Write the systematic position of
 - (b) Give one example of gram-negative bacteria.

Azotobacter.

- (c) Give one example of free-living obligate
- (d) Write the identifying characters Azospirillum.

5. Answer any one question of the following:

(a) What is the role of Azospirillum in nitrogen fixation?

(3)

- (b) Write a note on carrier-based inoculant.
- 6. (a) Write the various steps of isolation of Azospirillum with diagram.

Or

(b) Write a note on maintenance and mass multiplication of Azotobacter.

UNIT-III

7. Answer any *three* of the following questions:

5

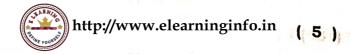
- (a) Give one example of cyanobacteria.
- (b) What is the function of heterocyst in Anabaena?
- (c) What do you mean by nitrogen fixation?
- (d) Give one example of aquatic heterosporous fern which contains an endophytic cyanobacterium.

(Turn Over)

(Continued) 20J/1162

8. Answer any one question of the following: 2

20J/1162



12. (a) Give an outline of mycorrhizal influence on growth and yield of crop plants.

(Turn Over)

(a) Write the characteristic features of blue-green algae.	Or
(b) Where does Azolla grow? (c) Write the role of cyanobacteria in rice cultivation. (b) Write a brief note on Azolla and Anabaena azollae association.	(i) Orchidaceous mycorrhiza (ii) Phosphorus nutrition in mycorrhiza
ament bas sententinism no store a street to	UNIT—V 13. Answer any <i>three</i> of the following questions:
10. Answer any three of the following questions: 1×3=3 (a) What is mycorrhiza? (b) Give the full form of VAM. (c) Name one fungal family involved in	1×3=3 (a) What is organic farming? (b) What is the main source of green manure? (c) What do you mean by green leaf
ectomycorrhizal association. (d) What do you mean by symbiotic association?	manuring? (d) What is vermicomposting?
11. Answer any one question of the following: 2	14. Answer any one question of the following: 2
(a) What is the difference between endomycorrhiza and ectomycorrhiza?	(a) Differentiate between biodegradable and non-biodegradable wastes.
(b) How does mycorrhiza promote plant growth?	(b) Write a short note on organic

(Continued) 20J/1162

biofertilizers.

(6)

15. (a) Write a note on recycling of biodegradable municipal and industrial wastes.

natworked and organizations with

(b) Write a brief account on the methods of vermicomposting and its field application.

lse mens yd ase can is enw

2019/TDC/ODD/SEM/ BOTSEC-301T/129 2

5