

**2020/TDC (CBCS)/ODD/SEM/
BOTSEC-301T/142**

**TDC (CBCS) Odd Semester Exam., 2020
held in March, 2021**

BOTANY

(3rd Semester)

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*

SECTION—A

Answer any *fifteen* of the following questions :

1×15=15

- 1. What do you mean by microbial inoculants?**
- 2. What is the technique of bacterization?**
- 3. Name the bacteria found in azotobacterin.**

(2)

4. Name one free-living nitrogen-fixing bacteria.
5. Write the full form of YEMA.
6. Name one actinomycetes that undergoes symbiosis with non-leguminous plant.
7. Name two plant hormones produced by *Azotobacter*.
8. Write the family in which *Azotobacter* belongs.
9. Which species is renamed as *Azomonas*?
10. Name the bacteria found in *Digitaria* grass.
11. Write two species of *Azospirillum*.
12. Name one species of *Azotobacter* which is a soil and rhizosphere inhabitant.
13. Name two cyanobacteria used in paddy fields.
14. What do you mean by algalization?
15. Name one species of *Azolla* commonly found in India.

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(Continued)

(3)

16. Write the full form of CRRI.
17. Name the scientist who work on mass cultivation of *Azolla* at CRRI.
18. Name one heterosporous fern which contains an endophytic cyanobacterium.
19. Write two characters of VAM fungi.
20. What is Ectendomycorrhiza?
21. Name the mycorrhizal type found in all groups of plant kingdom.
22. Give two examples of VAM fungi.
23. What is the full form of 'pt'?
24. Name the mycorrhizal type found in *Orchidaceae* family.
25. What is green manuring?
26. Name two crops used for green leaf manuring.
27. Give two examples of industrial wastes.

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(Turn Over)

(4)

28. What do you mean by sludge?
29. What is vermicomposting?
30. Define earthworm castings.

SECTION—B

Answer any *five* of the following questions : $2 \times 5 = 10$

31. Write a note on the mass culture of *Rhizobium*.
32. Write the characteristic features of *Rhizobium*.
33. Write the characteristic features of *Azospirillum*.
34. Write a short note on *Azotobacter* as biofertilizer.
35. What is the role of cyanobacteria in rice cultivation?
36. Write a short note on the significance of *Azolla*.

(5)

37. Write the role of mycorrhizal fungi as biofertilizer.
38. Write a note on VAM fungi.
39. Write a note on green manuring.
40. Write the importance of biocompost.

SECTION—C

Answer any *five* of the following questions : $5 \times 5 = 25$

41. Write the various methods involved in the identification of *Rhizobium*.
42. Describe the methods of isolation of *Frankia* in actinorrhizal symbiosis.
43. Give an account of the crop response of *Azotobacter* inoculant after field application.
44. Write a note on the mass multiplication of *Azospirillum* inoculant.
45. Describe the role of *Azolla* as biofertilizer.
46. Write a note on *Azolla* and *Anabaena Azollae* association.

(6)

47. Give an account on the classification of mycorrhiza.
48. Describe the methods of inoculum production of VAM fungi.
49. Write a note on agricultural and industrial wastes.
50. Give an account of vermicomposting.

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