

**2025/FYUG/ODD/SEM/
BOTDSM-101T/221**

FYUG Odd Semester Exam., 2025

BOTANY

(1st Semester)

Course No. : BOTDSM-101T

(Biodiversity)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

UNIT—I

1. Answer any *two* from the following : $2 \times 2 = 4$
- (a) Differentiate between Gram-positive and Gram-negative bacteria.
 - (b) Write the characteristic features of viruses.
 - (c) Write a brief note on TMV.
2. Answer any *one* from the following : 10
- (a) With the help of suitable diagram, describe the structure of T-phage. Write about economic importance of viruses.

$6 + 4 = 10$

(2)

- (b) Explain the mechanism of transformation with reference to Griffith's experiment. Give an account of conjugation.

UNIT—II

3. Answer any two from the following :

- (a) Write a brief note on akinete.
- (b) What is isogamy? Give example.
- (c) Write two economic importances of algae.

4. Answer any one from the following :

- (a) Discuss in detail, Fritsch's classification of algae.
- (b) With suitable diagram, describe the morphology and life cycle of *Nostoc*. Add a note on *Vaucheria*.

UNIT—III

5. Answer any two from the following : 2×2=4

- (a) What is ectomycorrhiza? Give example.
- (b) What are lichens?
- (c) Give two examples of edible fungi.

(3)

- (b) Answer any one from the following : 10

6. Answer any one from the following : 10
- (a) With neat sketches, describe the life cycle of *Penicillium*. Add a note on *Rhizopus*.

- (b) Describe the features of lichens. Write a note on economic importance of lichens.

5+5=10

UNIT—IV

7. Answer any two from the following : 2×2=4

- (a) Write a short note on gemma cup.
- (b) Write the economic importance of bryophytes.

- (c) What is columella in bryophytes?

8. Answer any one from the following : 10

- (a) Explain the morphology and life cycle of *Marchantia*. Write a note on adaptation to land habit.

6+4=10

- (b) Write about general characteristics of bryophytes. Discuss the evolutionary trends of sporophytes in bryophytes.

5+5=10

UNIT—V

9. Answer any *two* from the following :

- (a) Write a note on 'organ sui generis' in *Selaginella*.
- (b) Write a note on *Rhynia*.
- (c) Point out the general characteristics of pteridophytes.

10. Answer any *one* from the following :

- (a) Write a note on economic importance of gymnosperms. Give a brief account of early land plants.
- (b) Define heterospory. Write a detailed note on heterospory and seed habit in *Selaginella*. Discuss the significance of heterospory.

2+6+2
