Total number of printed pages–4

1A (Sem–1/ITEP) BOT01 MN

2025

BOTANY

(Minor)

Paper : BOT0100104–N

(Plant and Microbial Diversity)

Full Marks : 45

Time : 2 hours

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

1. Answer the following questions : (***all*** are ***compulsory***) 1×5=5

   (a) Which algae is used in agar production ?

   (b) What are basidiospores?

   (c) What do you mean by the term acropetalsequence ?

   (d) Name the viral agent that causes the potato spindle tuber disease

(e) Mention the botanical name of an essential oil yielding plant belong to the family 'Lamiaceae'.

2. Answer the following questions : ***(any five)*** 2×5=10

(a) Explain the role of heterocyst in Nostoc.

(b) Who proposed the theory of 'special creation'? Mention its limitations.

(c) Why chara is considered as an advanced algae?

(d) What are phytoplanktons? Mention its importance.

(e) Why was the theory of spontaneous generation rejected?

(f) Differentiate between Cycas and Gnetum.

(g) What are the two methods of viral replication? Define it.

(h) What are the primary structures in bacterial cells?

(i) Define gamosepalous. Give an example of plant where it is found.

(j) Define protostele and siphonostele.

3. Write short notes on : ***(any four)*** 5×4=20

(a) Different types of asexual spores found in fungi

(b) Classification of lichen based on their thallus structure

(c) Comparative account on Gymnosperm and Angiosperm

(d) Miller-Urey experiment and explain its significance

(e) Lytic cycle in virus

(f) Differentiate between Archaebacteria and Eubacteria

(g) Elucidate the process of conjugation

(h) "Orchidaceae is concidered as advanced family"—give reasons

(i) Alternation of generation in Marchantia

4. Write ***any one*** of the following : 10

(a) Describe the general characters of Mucor. Draw a diagrammatic sketch of life cycle of Mucor.

(b) Give an account on ultrastructure of an algal cell with suitable diagram.

(c) Discuss the life cycle of Pteris with the help of diagram.

(d) Describe the different types of stele and its evolution in pteriodophyte.