

Exam. Code : 107401

Subject Code : 1709

B.Sc. Biotechnology 1st Semester (Batch 2021-24)

BOTANY—I

Paper : BTL102

Time Allowed—3 Hours] [Maximum Marks—40

Note :—Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The **fifth** question may be attempted from any section. Support your answer with suitable diagram wherever necessary. Be brief and to the point in your answers. All questions carry equal marks.

SECTION-A

1. (a) Give an account of general characters of Algae with particular reference to their vegetative and reproductive diversity.
- (b) Briefly discuss the major characters on the basis of which Algae differs from Bryophytes. 5+3=8
2. (a) Define Alternation of Generations. Discuss it in the light of life cycle pattern in Gymnosperms.
- (b) Comment upon the major features on the basis of which fungi are recognised as an independent Kingdom. Name the major phyla of Kingdom Fungi and give their diagnostic features. 4+4=8

SECTION-B

3. (a) Define secondary growth. How does primary vascular tissue differ from secondary vascular tissue ? Give an illustrated account of formation of secondary vasculature in a typical dicot stem.
- (b) Differentiate between Simple and Complex permanent tissue. $6+2=8$
4. Write short explanatory notes on the following :
- (a) Periderm and its biological significance.
- (b) Anatomical peculiarities of Dicot and Monocot Leaf. $4+4=8$

SECTION-C

5. (a) Give an account of the contrivances for Cross Pollination in Plants. Discuss giving suitable examples.
- (b) Write explanatory note on the structure of anther tapetum and its functional significance. $5+3=8$
6. Write explanatory notes on the following :
- (a) Self incompatibility.
- (b) Endosperm and its morphological nature. $4+4=8$

SECTION-D

7. (a) What do you infer from Artificial System of Classification ? How does it differs from Natural System of Classification ?
- (b) Write short explanatory notes on the following :
- (i) Aestivation. $4+4=8$
- (ii) Floral Symmetry. $4+4=8$
8. (a) Give an account of diagnostic characters and economic importance of Family Apiaceae and Poaceae.
- (b) Relative position of floral organs on the thalamus. $6+2=8$