3 (Sem–1) BOT M1

2021

(Held in 2022)

BOTANY

(Major)

Paper : 1·1

(Plant Kingdom, Algae and Fungi)

Full Marks : 60

Time : Three hours

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

1. Fill in the blanks with appropriate word(s) : 1×7=7

   (a) Male reproductive structure of Chara is known as _____ .

   (b) In BGA, gaseous nitrogen is fixed in a specialized cells, known as _____ .

(c) The chemical process by which glucose is broken down anaerobically into CO_2 and alcohol is known as _____ .

(d) _____ is the reserve food material found in red algae.

(e) Tikka disease of groundnut is caused by _____ .

(f) Auxospores are found in _____ .

(g) The term 'heterothallism' was first coined by _____ .

2. Define the following terms : 2×4=8

(a) Obligate parasite

(b) Epiphytes

(c) Cryptogams and phanerogams

(d) Halophytes

3. Write briefly on ***any three*** of the following : 5×3=15

(a) General account of Bacillariophyceae

(b) Role of algae in soil fertility

(c) Heterothallism in Mucorales

(d) Development of ascus and ascospores

(e) Degeneration of sex in fungi

4. Answer ***any three*** of the following : 10×3=30

(a) What are different modes of sexual reproduction found in algae? Write about the evolution of sex in green algae. 3+7=10

(b) Discuss the role of pigments and reserve food materials in classification of algae. 10

(c) What is the name of causal organism of 'late blight of potato'? Give a clear and illustrated account of the life history of this fungus. 1+9=10

(d) What are heteroecious fungi? Describe the life history of an economically important heteroecious fungus. 2+8=10

(e) Describe briefly the structure and development of sex organs of Chara with the help of labelled diagram. 10

(f) What are different spore bearing structures found in Basidiomycetes? Briefly write about their structure and development. 4+6=10
