

1128

B.Sc. (Hons.) Biotechnology

First Semester

BIOT-Sem-I-III-T (b): Life Sciences

Time allowed: 3 Hours

Max. Marks: 67

NOTE: Attempt five questions in all, including Question No. IX (Unit-III) which is compulsory and selecting two questions each from Unit I-II.

x-x-x

UNIT - I

- I. a) How do plants respond to changes in environment?
b) Differentiate between Bryophytes and Pteridophytes. (7,6)
- II. a) Discuss the role of Phloem in transport in plants.
b) Explain the structure of the Male reproductive organ in angiosperms. (6,7)
- III. a) Explain the significance of food chain in ecosystem citing an example.
b) Discuss the biotic components and their role of the ecosystem. (7,6)
- IV. a) What is the role and significance of Habitat in Ecosystem?
b) Discuss the different types of succession with example. (6,7)

UNIT - II

- V. a) Discuss the components of innate immune system.
b) Describe the mechanism of gas exchange in lungs. (7,6)
- VI. Explain the architecture of Digestive system mentioning the role of each component. (13)
- VII. a) Discuss the different sense organs and their role.
b) Draw a well labeled diagram of neuron and discuss its role in nervous system. (6,7)
- VIII. a) What are the hormones secreted by the Pituitary gland? Discuss their role.
b) Draw a detailed and well labeled diagram of the human male reproductive organ. (5,8)

(2)

UNIT - II

IX. Attempt the following:-

- a) Define Angiosperms. (2)
- b) Role of Bowmann's capsule (2)
- c) Two proteases secreted in intestine (2)
- d) Animal behavior (3)
- e) Food web (2)
- f) Two proteins involved in muscle contraction (2)
- g) Role of Anther in plant reproduction (2)

UNIT - II