

# B. Sc. Part-III

## BOTANY

### Paper-II (Ecology and Economic Botany)

#### Multiple choice question

1. Which statement is correct with respect to the food chain?
  - (a) Every component of food chain form trophic level
  - (b) Inter-relation between different food chain is known as a food web
  - (c) All the chains formed by nutritional relations is used to understand energy flow
  - (d) All of the above
2. Which is not the characteristic of a population?
  - (a) Nataliy
  - (b) Mortality
  - (c) Stratification
  - (d) Sex ratio
3. In an ecotone, the species which become abundant are called:
  - (a) Edge species
  - (b) Keystone species
  - (c) Endemic species
  - (d) Foster species
4. With reference to ecological succession, which among the following community is also known as a 'pioneer community' due to its ability to colonize bare rock?
  - (a) Fungi
  - (b) Blue Green algae
  - (c) Lichens
  - (d) Mosses and Liverworts
5. Coral reefs are:
  - (a) Arid ecosystem
  - (b) Aquatic ecosystem
  - (c) Estuarine system
  - (d) Marine ecosystem
6. Gifts to the new world of old world are:
  - (a) Paddy and cotton
  - (b) Potato, tobacco and maize
  - (c) Wheat and barley
  - (d) Beet root and sugarcane
7. The common beard wheat is:
  - (a) *Triticum aestivum*
  - (b) *T. turgidum*
  - (c) *T. monococcum*
  - (d) All of the above

8. Central Potato Research Institute is located at:

- (a) Shimla
- (b) Cuttack
- (c) Coimbatore
- (d) Pusa

9. The fatty oils which do not absorb atmospheric oxygen are known as:

- (a) Drying oils
- (b) Semi-drying oils
- (c) Non-drying oils
- (d) Essential oils

10. Asafoetida is a gum resin obtained from:

- (a) Roots
- (b) Stem
- (c) Leaves
- (d) Bark

11. Visible spectrum is:

- (a) 315-400 nm
- (b) 700-710 nm
- (c) 380-780 nm
- (d) 280-315 nm

12. 'Amarbel' *Cuscuta* is an example of:

- (a) Total root parasite
- (b) Total stem parasite
- (c) Partial stem parasite
- (d) Partial root parasite

13. Which of these is a characteristics of a tropical rain forest:

- (a) Open woodland
- (b) Flat-topped trees
- (c) Complex vertical stratification
- (d) Broad leaved trees

14. Which of the following is a food grain:

- (a) Caryopsis
- (b) Cypsella
- (c) Siliqua
- (d) None of the above

15. Bran oil is obtained from:

- (a) Wheat
- (b) Barley
- (c) Maize
- (d) Rice

### **Short answer question**

1. What is 'green house' effect?
2. Discuss commensalism with suitable examples.
3. What do you understand by population equilibrium?
4. Differentiate between mineralization and humification.
5. Define vivipary. Which class of plants show vivipary.
6. Write botanical names of bread millet and pearl millet. Give the chief centres of their cultivation in India.
7. Give a brief description of different types of sugarcane.
8. What is biological importance of the legumes.
9. Name four sources of volatile oils.
10. What are spices? Give families, botanical names and area of cultivation of any five important spices cultivated in India.

### **Long answer question**

1. Discuss the ecological adaptation in hydrophytes or xerophytes. Give suitable examples.
2. Define a community. Describe various features that characterize a community with examples.
3. Define succession. Give an account of the general process of succession in nature.
4. What are cereals and to which family do they generally belong? Write botanical names of any four cereals.
5. Write a brief account of medicinal plants you have studied along with botanical notes.