

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH/APRIL 2015

(UG-CCSS)

Core Course

Botany

BO 6B 08—ENVIRONMENTAL SCIENCE, PHYTOGEOGRAPHY AND EVOLUTION

(2012 Admissions)

Time : Three Hours

Maximum : 30 Weightage

I. Answer *all* questions. Choose the correct answer :

1 Succession following a volcanic eruption is referred to as :

- (a) Secondary succession. (b) Climax succession.
(c) Seral stages. (d) Primary succession.

2 The amount of energy that is fixed during photosynthesis is

- (a) primary productivity. (b) Biomagnifications.
(c) succession. (d) Secondary productivity.

3 A species that has an effect out of all proportion to its commonness is called a:

- (a) Dominant species. (b) Umbrella species.
(c) Keystone species. (d) Flagship species.

4 *Velamen* roots are seen in :

- (a) Xerophytes. (b) Hydrophytes.
(c) Epiphytes. (d) Halophytes.

Fill in the blanks :

5 The acronym IUCN stands for _____

6 Presence of *aerenchyma* is _____ adaptation.

7 Study of population characteristics _____

8 The association in which both the partners are benefited.

Answer in a single word :

9 Name an example for a flagship species.

10 Name an endemic species to Kerala.

11 Name an exotic plant to Kerala.

12 Name a biodiversity hot spot in India.

(12 x ¼ = 3 weight:

II. Answer *all* questions. Short answer :

13 Differentiate between Keystone species and Flagship species.

14 Write a brief account on prions.

15 Briefly explain age and area hypothesis.

16 Briefly explain the α , β and γ diversity.

17 What is a primary pollutant ?

18 Explain Biomagnification.

19 Explain Natalality.

20 Write a brief account on acid rain.

21 Write a brief account on Oparin concept.

(9 x 1 = 9 weights e)

III. Answer any *five* questions. Short essay :

22 What is meant by ecological indicators ? Describe their role in environmental monitoring.

23 Describe the theories on endemism.

24 Differentiate between allopatric and sympatric speciation.

25 Explain the different types of ecological pyramids.

26 Explain the quadrat and transect methods of sampling techniques.

27 Differentiate Darwinism and Neo Darwinism.

28 Describe the evidences and impact of continental drift.

(5 x 2 = 10 weightage)

IV. Answer any *two* questions. Essay :

29 Describe the phytogeographical zones of India.

30 What is plant succession ? Explain xerosere.

31 Describe the various types of plant adaptations to different environmental conditions.

(2 x 4 = 8 weightage)