

Total pages: 2

PG CBCS
M.SC. Semester-III Examination, 2021
BOTANY
 PAPER: BOT 303
(ECOLOGY & ENVIRONMENTAL BIOLOGY)

Full Marks: 40**Time: 2 Hours**

Write the answer for each unit in separate sheet

BOT 301.1

ECOLOGY

Answer any TWO questions from the following:

2X10 = 20

1. Define carrying capacity. Differentiate between r and k selection. Describe different types of positive interactions. 2+4+4
2. Describe grazing and detritus food chains and their interrelationship in a forest ecosystem. Write a short note on ecological efficiencies. 6+4
3. What are meant by mesophytes? Give an example. Write about the Morphological, anatomical, physiological adaptive features of xerophytes. Mention the function of salt bladders? 2+6+2
4. Give the equations and properties for exponential and logistic growth in different populations. Explain with graphical representations four different outcomes of predator-prey interactions according to Lotka-Volterra model. 4+6
5. Write short notes on the following 2.5×4
 - a. Autoecology
 - b. climax community
 - c. Hypervolume niche
 - d. Deep ecology

BOT 301.2

ENVIRONMENTAL BIOLOGY

Answer any TWO questions from the following:

2X10 = 20

1. What is meant by biodiversity? Distinguish between α -diversity and β -diversity. Discuss the role of Ramsar site in conservation of biodiversity. 2+3+5

(P.T.O.)

(2)

2. What is acid precipitation? Differentiate between dry precipitation and wet precipitation. Describe the harmful effect of acid rain on aquatic ecosystem and human health. 2+3+5
3. Define pollution. Write a short note on Earth summit. Write a brief note on CBD. 2+4+4
4. What is ozone hole? Depict Chapman cycle. Write the causes of ozone depletion and mention its harmful effects on human health. 2+3+5
5. Write short notes of the following topics: 2 X 5
- (a) Chipko movement
- (b) Debates on *Eucalyptus*
