

P. P. SAVANI UNIVERSITY

Third Semester of B.Sc. Examination
December-2021

SSES2130/SSBT2190- Biodiversity and Conservation

13.12.2021, Monday Time: 09:00 a.m. to 11:30 a.m. Maximum Marks: 60

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

Section-I (Total Marks - 30)

Q.1 Short Questions

1.1 Objectives

[10]

[05]

- 1.1a Which habitats are less seasonal, relatively more constant and predictable?
- A Tropical
 - B Arid
 - C Subtropical
 - D Semiarid
- 1.1b The birds also show _____ because many are migratory.
- A Successional patterns
 - B Temporal patterns
 - C Seasonal patterns
 - D None of the above
- 1.1c Due to the diversity of faunal groupings found in any given area, a variety of procedures must be used to acquire a
- A Proper sample
 - B Collective sample
 - C Random sample
 - D Representative sample
- 1.1d Techniques for surveying fish does not include
- A Gill nets
 - B Visual census
 - C Video
 - D Spotlighting
- 1.1e Which is the most significant cause of biodiversity loss globally?
- A Habitat loss
 - B Fragmentation
 - C Both a and b
 - D None of the above
- 1.1f Due to a loss in biodiversity, diseases are likely to occur more
- A Steadily
 - B Slowly
 - C Frequently
 - D Gradually

- 1.1g In India, there are how many existing wildlife sanctuaries that covering 3.72 percent of the country's land area?
- A 566
 - B 576
 - C 526
 - D 516

- 1.1h When was the concept of biosphere reserves introduced as part of UNESCO's Man and Biosphere (MAB) Programme?
- A 1941
 - B 1987
 - C 1971
 - D 1921

- 1.1i The ethnic and indigenous people have conserved several plants and _____ cultivars of various agricultural crops.
- A Rare
 - B Vulnerable
 - C Threatened
 - D Endangered

- 1.1j Who coined the word Social forestry?
- A Wilson
 - B Ram Prasad
 - C Prasad
 - D Westoby

1.2 Answer the Following: (MCQ/Short Question/Fill in the Blanks) [05]

- 1.2a Agroforestry is a collective name for land use systems involving trees combined with crops and animals on the same unit of land. (True/False)
- 1.2b The official ground for JFM was not prepared by the National Forest Policy of 1988. (True/False)
- 1.2c The sacred groves are the natural forests where interference of all kind of human activities are allowed. (True/False)
- 1.2d The IUCN Red list categories and criteria are clearly defined system for classifying species which are at low risk of global extinction. (True/False)
- 1.2e Cover is the percentage area of the ground occupied by _____ of a species when viewed from above.

Q.2 Short Notes (Attempt any two) [06]

- A What is so special about tropics that might account for their greater biological diversity?
- B How can you estimate community diversity?
- C Describe patterns of biodiversity according to time.

Q.3 Explain in detail (Attempt any two) [14]

- A Explain threats to biodiversity.
- B Illustrate IUCN Red list categories in detail.
- C What is the role of indigenous people in biodiversity conservation?

Section-II (Total Marks - 30)

Q.1 Short Questions

[10]

1.1 Objectives

[05]

1.1a Which example below is not a threat to biodiversity?

- A Habitat destruction
- B Bioremediation
- C Introduced Species
- D Over-exploitation

1.1b Arboretum is

- A A forest patch
- B A piece of social forestry
- C Botanical garden with trees and shrubs
- D Botanical garden with cacti and herbs

1.1c Most of the endangered species are the victims of

- A Over hunting
- B Acid rain
- C Competition with introduced species
- D Habitat destruction

1.1d Red data book is concerned with

- A Red pigmentation of plants
- B Red algae
- C Endangered species
- D Exotic species

1.1e Gir sanctuary is mainly for

- A rhino
- B Tiger
- C lion
- D elephant

1.1f Germplasm conservation at liquid Nitrogen temperature is

- A stratification
- B cryopreservation
- C Scarification
- D None of these

1.1g Chipko movement was launched for the protection of

- A forests
- B livestock
- C wetlands
- D Grasslands

1.1h Estuaries are

- A Freshwater wetlands
- B Salt water wetlands
- C Least productive ecosystem
- D None of the above

1.1i Nanda Devi biosphere reserve is found in

- A Uttaranchal
- B Assam
- C Himachal Pradesh
- D Andhra Pradesh

1.1j National Forest Policy was enunciated in

- A 1972
- B 1978
- C 1982
- D 1988

1.2 Answer the Following: (MCQ/Short Question/Fill in the Blanks)

[05]

- 1.2a MAB of UNESCO stands for_____.
- 1.2b World Summit on Sustainable development (2002) was held in_____.
- 1.2c The term hotspot was coined by_____.
- 1.2d First National Park of India was.
- 1.2e _____and _____in India are among the 25 global biodiversity hotspots.

Q.2 Short Notes (Attempt any two)

[06]

- A What are the factors that determine a species as threatened?
- B Define sacred groves. What is their role in the conservation of biodiversity?
- C What is an endangered species? Give an example of an endangered plant and animal species each?

Q.3 Explain in detail (Attempt any two)

[14]

- A Explain In-situ and Ex-situ conservation with examples?
- B Describe the role of local communities and traditional knowledge in conservation?
- C Explain the role of remote sensing in management of natural resources?