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**Presidency University**

**Bengaluru**

**SCHOOL OF DESIGN**

**MIDTERM EXAMINATION**

**Sem & AY**: Even Sem 2022-23

**Course Code**: CHE1020

**Course Name**: Environmental Studies and Sustainable Development

**Program & Sem**: B.Des & 2nd, 4th & 6th Sem

**Date**: 17 April 2023

**Time**: 2:30 PM to 3:30 PM

**Max Marks**: 50

**Weightage**: 25%

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**Instructions:**

1. *Read the question properly and answer all the questions accordingly.*
2. *Complete the test within the time given.*

**Part A [Memory Recall Questions]**

**Answer all the Questions. Each question carries ONE mark. (25Qx 1M= 25M)**

1. The word ecology coined by (1 Mark, CO1, Knowledge)
2. Sir Arthur Tansley b) Earnest Haeckel c) Utpary d) Sukachev
3. \_\_\_\_\_\_\_\_\_\_floats in the upper part of an aquatic ecosystem

(1 Mark, CO1, Knowledge)

1. Benthos b) Phytolankton c) Nekton d) both (a) and (b)

1. In the biosphere energy is received from (1 Mark, CO1, Knowledge)
2. The Sun b) The interior of the earth c) Both (a) and (b) d) Work
3. Ecology deals with the study of (1 Mark, CO1, Knowledge)
4. Ecosysytem b) Living and non-living beings c) Living beings d) All the above

1. During photosysnthesis green plants producing their own food in the form of   
    (1 Mark, CO1, Knowledge)
2. Carbohydrate b) Protien c) Mineral d) All the above
3. Tertiary consumers derive their energy from\_\_\_\_\_ (1 Mark, CO1, Knowledge)
4. Producers b) Herbivores c) Quaternary consumers d) Secondary consumers
5. Importance of food chain includes (1 Mark, CO1, Knowledge)
6. Energy flow b) Nutrient cycling c) Ecological balance d) All the above
7. Importance of food web includes (1 Mark, CO1, Knowledge)
8. Opens flow of energy
9. Gives greater stability to the ecosystem
10. Number of options are available at each tropic level
11. All the above
12. Biogeochemical cycle includes (1 Mark, CO1, Knowledge)
13. Nutrient cycling through biotic components
14. Nutrient cycling through abiotic components
15. Nutrient cycling through biotic and abiotic components
16. None of the above
17. Ecosystem has two components (1 Mark, CO1, Knowledge)

a) Plants and animals b) Animals and birds c) Biotic and abiotic d) Vertebrates and non-vertebrates

1. Species diversity is the diversity at the ………………. Level (1 Mark, CO2, Comprehension)

a) Population b) Community c) Species d) Size

1. Barnacles on a Whale (1 Mark, CO2, Comprehension)

a) Predation b) Parasitism c) Commensalism d) Mutualism

1. \_\_\_\_\_\_\_\_\_ is one of the most prevalent hotspots of biodiversity in india

(1 Mark, CO2, Comprehension)

a) Deccan b) Western ghats c) Ganges d) None of the above

1. \_\_\_\_\_\_\_\_\_\_\_\_ is defined as an ecological state of a species being unique to a specific geographic location. (1 Mark, CO2, Comprehension)

a) Exotic species b) Endemic species c) Ecosystem d) None of the above

1. Where can one find the mega biodiversity on earth? (1 Mark, CO2, Comprehension)

a) Nile Delta, Egypt b) Mount Olympus, Greece c) Amazonian rain forest, Brazil

d) None of the above

1. An ecological state wherein a species considered to be facing a very high risk of extinction in the wild. (1 Mark, CO2, Comprehension)

a) Ecosystem b) Exotic species  c) Endangered species

d) None of these

1. Galapogos tortoise is an example of (1 Mark, CO2, Comprehension)

a) Endemic species b) Exotic species c) Rare species d) Extinct speices

1. Saber tooth tiger is an example of (1 Mark, CO2, Comprehension)
   1. a) Endangered species b) Growing species c) Migrating species d) Extinct species
2. \_\_\_\_\_\_\_\_\_\_\_biodiversity related to habitat in an area?

(1 Mark, CO2, Comprehension)

a) Genetic b) Species c) Ecosystem d) All of above

1. Pollination is an example of (1 Mark, CO2, Comprehension)

a) Denitrification b) Primary succession c) Carrying capacity d) Mutualism

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ occurs when a large numbers of species goes extinct over a relatively short period of time. (1 Mark, CO2, Comprehension)

a) Extirpation b) Extinction c) Mass extinction d) Mass effect

1. To be classified as a biodiversity hotspot, a region must have lost at least \_\_\_\_\_\_\_\_\_ of its original natural vegetation, usually due to human activity

(1 Mark, CO2, Comprehension)

a) 70 percent b) 10 percent c) 40 percent d) 59 percent

1. \_\_\_\_\_\_\_\_\_\_\_\_ is a term used to refer to the world’s top biodiversity-rich countries.

(1 Mark, CO2, Comprehension)

* + 1. Multicultural Countries
    2. Megadiversity Countries
    3. Monocultural Countries
    4. Traditional Countries

1. An interaction where one organism benefits and the other organism is harmed

(1 Mark, CO2, Comprehension)

a) Parisitism b) Mutualism c) Commensalism d) All the above

1. Termites are example for (1 Mark, CO2, Comprehension)

a) Parisitism b) Mutualism c) Commensalism d) Predation

**Part B [Thought Provoking Questions]**

**Answer all the Questions. Each question carries FIVE marks. (3Qx 5M= 15M)**

1. What are ecological pyramids? Explain the pyramid of biomass with representation.

(1 Mark, CO1, Knowledge)

1. What are the effects of air pollution on road sign board, digital board and human health? List out the various actions to control the air pollution.

(1 Mark, CO1, Knowledge)

1. As biodiversity signifies the variety of biotic community that exists in a given ecosystem,  
   it can be classified into different types. Discuss in detail.

(1 Mark, CO2, Comprehension)

**Part C [Problem Solving Questions]**

**Answer all the Questions. Each question carries TEN marks. (1Qx 10M= 10M)**

1. Explain how carbon cycle is processed in the environment and discuss the effect of human  
   activities on carbon cycle. (1 Mark, CO1, Knowledge)