Daily Subject wise Quiz Day 61 Environment VI (Online Prelims Test)

1) Consider the following statements with respect to Species Richness

1. It refers to the number of various species in a defined area.
2. Alpha richness is the number of species found at a single point in a given space.

Which of the above statements is/are correct?

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : a

Species Richness

- Species Richness refers to the number of various species in a defined area.
- It is categorised as follows:

1. Point Richness is the number of species found at a single point in a given space.
2. Alpha Richness is the number of species found in a homogenous area.
3. Beta Richness is the rate of change in the composition of species across different habitats.
4. Gamma Richness is the rate of change in a large landscape.

2) Which of the following statements are correct about Simpson index

1. It is a simple mathematical measure that characterizes species diversity in a community.
2. It has a value between 1 to 10 , where higher values indicates more diversity.

Select the correct answers using the codes given below

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : a

Simpson index

- Simpson's diversity index (D) is a simple mathematical measure that characterizes species diversity in a community.
- In ecology, species richness refers to a number of species and species evenness refers to the homogeneity of the species.
- That is, the more equal the proportions for each of the groups, the more homogeneous, or

even, they are. Different fields of application may use different terminology for these concepts
- This index has a value between 0 and 1. Lower values indicate more diversity while higher values indicate less diversity.

3) Consider the following statements with respect to Types of diversity

1. In a species with high genetic diversity, there would be many individuals with a wide variety of different traits.
2. Taxonomic diversity means a genetic relationship between different groups of species.

Which of the above statements is/are correct?

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : c

Genetic diversity

- Genetic Diversity refers to the range of different inherited traits within a species. In a species with high genetic diversity, there would be many individuals with a wide variety of different traits.
- Genera is a group into which animals, plants, etc. that have similar characteristics are divided, smaller than a family and larger than a species.
- Taxonomic diversity means a genetic relationship between different groups of species, It is also called phylogenetic diversity.

4) Consider the following statements with respect to Adaptations

1. Adaptations are any behavioural or physical characteristics of an animal that help it to survive in its environment.
2. Adaptation characteristics fall into three main categories such as body parts, body coverings, and behaviours.

Which of the above statements is/are correct?

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : c

Adaptations

- The presence of specific body features (or certain habits) which enable an animal or a plant to live in a particular habitat (or surroundings) is called adaptation.
- The body features and habits that help animals (and plants) to adapt to their particular habitats or surroundings are a result of the process of evolution.
- Adaptations are any behavioral or physical characteristics of an animal that help it to survive in its environment.
- These characteristics fall into three main categories: body parts, body coverings, and behaviors.

5) Which of the following are correct about Biodiversity

1. It forms the foundation for an array of ecosystem services which are critical to human well being.
2. Bio diversity hotspots host their diverse ecosystems on just 2.4% of the planet's surface.

Select the correct answers using the codes given below

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : c

Bio diversity

- It is the variety of all living organisms on Earth, this includes terrestrial, marine and other aquatic ecosystems and the ecological complexes which they are part of
- This diversity can occur between species within species and at ecosystem level.
- Biodiversity helps to boost ecosystem productivity each species no matter what size have their own important role to play.