2.5.1 Zonation and Succession
Multiple Choice Questions

1. Zonation refers to:

   a. The gradual process of species evolving over millions of years.

   b. Changes in community structure along an environmental gradient.

   c. The cyclical pattern of seasonal changes in an ecosystem.

   d. The random distribution of species in a habitat.

2. Which of the following environmental gradients can lead to zonation?

   a. Time of day

   b. Changes in elevation.

   c. Population size

   d. Rate of decomposition

3. Transects are used in ecological studies of zonation to:

   a. Capture and mark mobile organisms.

   b. Randomly sample a population.

   c. Measure biotic and abiotic factors along an environmental gradient.

   d. Estimate the total biomass of an ecosystem.

4. Succession is defined as:

   a. The movement of organisms from one habitat to another.

   b. The replacement of one community by another over time.

   c. The process of energy flow through an ecosystem.

   d. The interaction between different species in a community.

5. Primary succession occurs:

   a. After a forest fire.

   b. On abandoned agricultural land.

   c. On newly formed substrata where there is no soil.

   d. In areas with established vegetation.

6. Which of the following is an example of a location where primary succession might occur?

   a. A plowed agricultural field

   b. A newly formed volcanic island.

   c. A forest that has been clear-cut

   d. A grassland after a controlled burn

7. Secondary succession occurs:

   a. On bare rock.

   b. On bare soil where a pre-existing community has been removed.

   c. In aquatic ecosystems.

   d. In the absence of sunlight.

8. A plagioclimax community is:

   a. A stable climax community that has reached its final stage of development.

   b. A community that has been altered or arrested by human activity.

   c. A community that is highly diverse and resilient to disturbance.

   d. A community composed entirely of pioneer species.

9. r-strategist species are typically found in:

   a. Stable, climax communities.

   b. Early stages of succession.

   c. Highly competitive environments.

   d. Ecosystems with limited resources.

10. A key feature of K-strategist species is:

    a. Rapid reproduction and short lifespans.

    b. High dispersal rates and colonization ability.

    c. Adaptation to unstable and disturbed environments.

    d. Long lifespans and adaptation to stable environments.