21 Defining a Species

Subject Outline terms and phrases	**species, mode of reproduction, interbreed, fertile, morphological similarity, biochemical similarity, gene pool, zygote, pre-zygotic, temporal isolation, behavioural isolation, mechanical isolation, gamete isolation, post-zygotic, hybrid, hybrid inviability, hybrid sterility**

1. Define the following terms.

   (a) community _____

   _____

   _____

   (b) population _____

   _____

   _____

   (c) gene pool _____

   _____

   _____

2. A species can be defined using methods based on structural features, biochemical similarity, ability to reproduce, or gene pool.

   Explain how each of these methods is used to define a species.

   structural features (morphological): _____

   _____

   biochemical similarity: _____

   _____

   ability to reproduce: _____

   _____

   gene pool: _____

   _____

3. List six mechanisms that maintain reproductive isolation of species in a community. Classify each mechanism as **pre-zygotic** or **post-zygotic**.

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

(6) _____

4. Explain how each of the mechanisms listed in question 3 helps to maintain reproductive isolation.

(1) _____

(2) _____

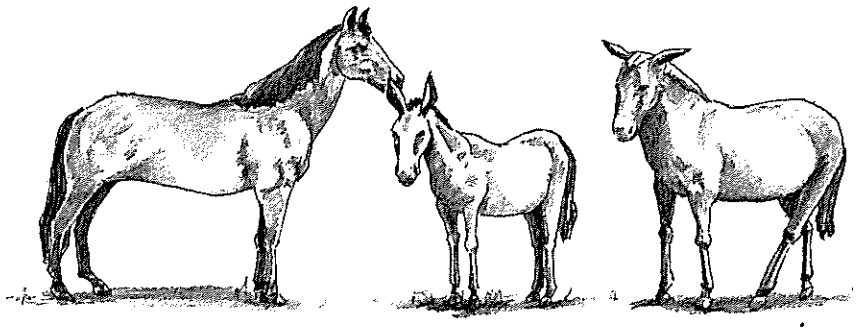
(3) _____

(4) _____

(5) _____

(6) _____

5. Explain why horses and donkeys are considered to be different species even though they are able to produce offspring (the mule).



horse donkey mule

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