1. Carbon dioxide in the atmosphere enters the biotic parts of the biosphere through _____.

2. Starfish live in saltwater ecosystems. Some species live in shallow tidal pools, while others live in the deepest parts of the oceans. This is a description of the _____ of starfish.

3. Cougars are predators that often eat weakened or diseased animals. This is a description of the _____ of cougars.

4. An ecologist who studies how several species in an area interact is interested in the biological organization called a(n) _____.

5. Referring to Figure 2-1, suppose 10 000 units of energy are available at the level of the grasses. What is the total number of energy units lost by the time energy reaches the coyote?

6. Referring to Figure 2-1, as matter and energy move from grasses to coyotes, the amount of available energy _____.

7. Referring to Figure 2-1, the relationship between cats and mice could best be described as _____.

8. Referring to Figure 2-1, the coyotes would be considered _____.

9. Referring to Figure 2-1, energy flows from _____ to _____.

10. An uncut lawn becomes a meadow and eventually a forest. This process is an example of _____.

11. The stable ecosystem that develops due to succession _____.

12. The effect of movement of people between counties has _____ effect on total world population.

13. A population that grows until it reaches its carrying capacity usually has the shape of an _____.

14. Density-independent factors are limiting factors whose effects are _____.

15. For a particular species, the carrying capacity is the maximum number of individual organisms that _____.

16. The major threat to biodiversity is _____.

17. Acid rain changes the pH of soil, killing some trees. This is an example of _____.

Table 5-1 shows the population sizes for 5 different species in four different areas.

<table>
<thead>
<tr>
<th>Area</th>
<th>Species U</th>
<th>Species V</th>
<th>Species W</th>
<th>Species X</th>
<th>Species Y</th>
<th>Species Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>0</td>
<td>6</td>
<td>8</td>
<td>0</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>C</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>4</td>
<td>3</td>
<td>11</td>
<td>1</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 5-1

18. From Table 5-1, which species has the highest average population size?
19. If the four areas in Table 5-1 were the only places in the world to find these organisms, which species most likely faces the greatest chance of extinction?

20. Which area in Table 5-1 has the greatest biodiversity?

21. If all four areas in Table 5-1 had identical climate and geology, which one would probably have the smallest area?

For many years orchid collectors searched Exotic Island for the beautiful Kimmarie Orchid, which is found no place else in the world. After they found the orchid, they brought it back to their homes. In the last couple of years the Kimmarie Orchid has not been found on the island. As a result, hobbyists are now sending the Kimmarie Orchid to be replanted on the island.

22. The Kimmarie Orchid became extinct in the wild due to _____.

23. Which one of the following is NOT a cause of acid precipitation?

24. Carnivorous birds that fed on organisms exposed to this chemical produced fragile eggs. The chemical is _____.

25. The body of water where fresh water from a river mixes with salt water is called

26. Few organisms live at the bottom of a deep lake because the lack of

27. Evaporation and condensation a part of the _____ cycle.

28. Plants lose water to the air through _____ (process).

Symbiotic Relationships

29. Relationship between organisms in which both organisms benefit _____

30. Relationship between organisms in which one organism benefits and the other is neither harmed nor benefited_____

31. Relationship between organisms in which one organism benefits at the expense of another_____

Biomes

32. Largest terrestrial biome that supports small plants and grasses, but few trees _____

33. Populated with broad-leaved hardwood trees that lose their leaves annually _____

34. Arid land with sparse, drought resistant plants _____

35. Treeless land where only small plants and grasses grow during the long summer days, ground permanently frozen _____.

36. Land with coniferous forests, peat swamps and long, harsh winters _____

Succession

The statements below describe the secondary succession in an area of Yellowstone National Park. Write the letter of the matching events in the order in which they occurred.

37. Grasses, ferns, and pine seedlings inhibited the area

38. annual wildflowers grew from the bare soil

39. a fire burned thousands of acres of land

40. a climax community of lodge pole pines developed