

1.	Which of the following terms refers to a region that is inhabited by a characteristic set of taxa, with boundaries that prevent the spread of the distinctive kinds of life to other regions and the immigration of foreign species?	
a)	biogeographic province	
b)	biome	
c)	biotic province	
d)	biosphere	
e)	biogeography	
	Ans: c Difficulty: Easy Link to: 8.2	

2.	The geographic distribution of living things is called:	
a)	biogeographic province	
b)	biome	
c)	biotic province	
d)	biosphere	
e)	biogeography	
	Ans: e Difficulty: Easy Link to: 8.6	

3.	A major ecological community characterized by a dominant vegetation type is called a(n):	
a)	biogeographic province	
b)	biome	
c)	biotic province	
d)	biosphere	
e)	biogeography	
	Ans: b Difficulty: Easy Link to: 8.3	

4.	Why are there fewer native species of trees in Europe and Great Britain than in all other temperate regions of the world?	
I.	in Europe, major mountain ranges run east - west	
II.	many species became extinct during glaciation	
III.	tree seeds could not spread during times of glaciation	

a)	I only
b)	II only
c)	I and III
d)	I and II
e)	I, II, and III
	Ans: e Difficulty: Medium Link to: 8.6

5.	Similar environments in different locations lead to the evolution of species with:
a)	similar adaptations
b)	similar predators
c)	the same behavior, but different bodily adaptations
d)	symbiotic relationships
e)	different biotic provinces
	Ans: a Difficulty: Easy Link to: 8.4

6.	Why are whooping cranes are being released into an area near Nashville, Tennessee?
a)	Commercial interests are raising them for their feathers.
b)	They are known to be excellent predators on pests in farm fields.
c)	Their numbers are crowding out other birds in adjacent areas.
d)	They are being reintroduced to an area where they lived long ago.
e)	Local residents purchased the birds for their viewing pleasure.
	Ans: d Difficulty: Easy Link to: case study 8.1

7.	Biogeography refers to:
a)	distribution of organisms in the food chain
b)	charting the pattern of habitat destruction
c)	geographic distribution of living organisms
d)	distribution of introduced species
e)	changes in wildlife habitat over time

	<p>Ans: c Difficulty: Easy Link to: 8.4</p>
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8.	The smallest units that are capable of sustaining life are:	
a)	the Lotka-Volterra equations	
b)	ecological communities	
c)	ecosystems	
d)	niches	
e)	habitats	
	Ans: b Difficulty: Easy Link to: 8.4	

9.	Continental drift caused by plate tectonics is thought to have caused all of the following except:	
a)	different biotic provinces	
b)	mutations of common genetic heritage	
c)	migrations	
d)	periodic unification and separation of the continents	
e)	decreased genetic variation worldwide	
	Ans: e Difficulty: Medium Link to: 8.2	

10.	Common vegetation in the _____ biome include deciduous trees, and dominant animals tend to be small mammals, birds, and insects.	
a)	temperate shrub lands	
b)	wetlands	
c)	tropical rain forests	
d)	tropical savannas	
e)	temperate forests	
	Ans: e Difficulty: Easy Link to: 8.8	

11.	_____ are dominated by dense stands of low vegetation sometimes known as "chaparral" that occurs in climates with seasonally-concentrated rainfall.	
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a)	Temperate shrub lands
b)	Wetlands
c)	Tropical rain forests
d)	Tropical savannas
e)	Temperate forests
	Ans: a Difficulty: Easy Link to: 8.8

12.	_____ occur in areas of high temperatures and where precipitation is abundant and distributed relatively evenly throughout the year.
a)	Temperate shrub lands
b)	Wetlands
c)	Tropical rain forests
d)	Tropical savannas
e)	Temperate forests
	Ans: c Difficulty: Easy Link to: 8.8

13.	Grasslands with scattered trees are known as _____.
a)	temperate shrub lands
b)	wetlands
c)	tropical rain forests
d)	tropical savannas
e)	temperate forests
	Ans: d Difficulty: Easy Link to: 8.8

14.	A species introduced into a new geographical area is called a(n):
a)	endemic species
b)	abundant species
c)	anemic species
d)	ubiquitous species
e)	exotic species

	<p>Ans: e Difficulty: Easy Link to: 8.1</p>
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15.	In 1876, A.R. Wallace developed a classification of six biogeographic provinces, a scheme that is still used today. All of the following are among Wallace's realms except:
a)	Polynesian (South Pacific Ocean)
b)	Ethiopian (Central and South Africa)
c)	Oriental (Indian Subcontinent and Malaysia)
d)	Nearctic (North America)
e)	Neotropical (Central and South America)
	<p>Ans: a Difficulty: Medium Link to: 8.2</p>

16.	The _____ biome consists of areas alternately exposed to air and covered by ocean water.
a)	intertidal
b)	fresh waters
c)	hydrothermal vents
d)	wetlands
e)	benthos
	<p>Ans: a Difficulty: Easy Link to: 8.8</p>

17.	The _____ biome includes regions such as estuaries, rivers, and lakes.
a)	intertidal
b)	fresh waters
c)	hydrothermal vents
d)	wetlands
e)	benthos
	<p>Ans: b Difficulty: Easy Link to: 8.8</p>

18.	In the _____ biome, typical vegetation may include small trees such as mangroves, shrubs, sedges, and mosses. Animals may include mammals, reptiles, snakes, birds, as well as invertebrates such as crabs or clams.
a)	intertidal
b)	fresh waters
c)	hydrothermal vents
d)	wetlands
e)	benthos
	Ans: d Difficulty: Easy Link to: 8.8

19.	In the _____ biome, sulfur-rich brines and chemosynthetic bacteria form the base of the food chain.
a)	intertidal
b)	fresh waters
c)	hydrothermal vents
d)	wetlands
e)	benthos
	Ans: c Difficulty: Easy Link to: 8.8

20.	_____ refers to the bottom of the ocean.
a)	intertidal
b)	fresh waters
c)	hydrothermal vents
d)	wetlands
e)	benthos
	Ans: e Difficulty: Easy Link to: 8.8

21.	In which of the following situations is divergent evolution most likely to occur:
a)	where species evenness is high
b)	where species diversity is high
c)	in stable environments, with little change over time
d)	in arid climates

e)	where populations are separated by geographic barriers
	Ans: e Difficulty: Medium Link to: 8.4

22.	Which of the following is an example of an ecological island?
a)	a city park
b)	a pond in the woods
c)	a stand of trees within the prairie
d)	an oasis in the desert
e)	all of these
	Ans: e Difficulty: medium Link to: 8.5

23.	Compared with a more homogeneous habitat, a habitat with a variety of local subenvironments will tend to:
a)	leads to lower species diversity
b)	can offer more possibilities of refuge to rare species
c)	follows the Principle of Competitive Exclusion
d)	provides a smaller number of habitats
e)	provides a smaller number of ecological niches
	Ans: b Difficulty: medium Link to: 8.4

24.	_____ are treeless plains in areas of low annual temperatures and low rainfall.
a)	Temperate grasslands
b)	Benthos
c)	Taiga
d)	Deserts
e)	Tundra
	Ans: e Difficulty: Easy Link to: 8.8

25.	The Gobi, Sahara, and Sonora are examples of the _____ biome.
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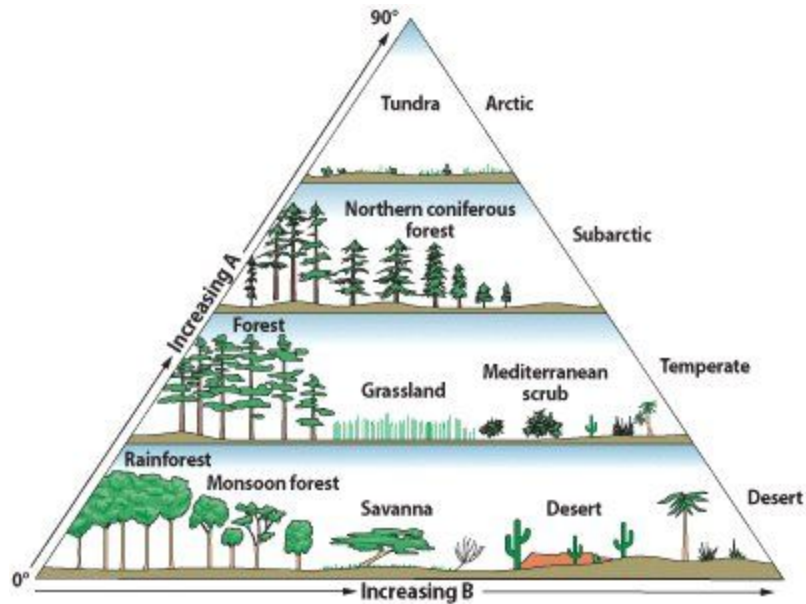
a)	temperate grassland
b)	benthos
c)	taiga
d)	desert
e)	tundra
	Ans: d Difficulty: Easy Link to: 8.8

26.	Also known as boreal forest, _____ consist(s) of forests located at high altitude or high latitude.
a)	temperate grasslands
b)	benthos
c)	taiga
d)	deserts
e)	tundra
	Ans: c Difficulty: Easy Link to: 8.8

27.	_____ include prairies of North America, steppes of Eurasia, plains of Africa, and the pampas of South America.
a)	Temperate grasslands
b)	Benthos
c)	Taiga
d)	Deserts
e)	Tundra
	Ans: a Difficulty: Easy Link to: 8.8



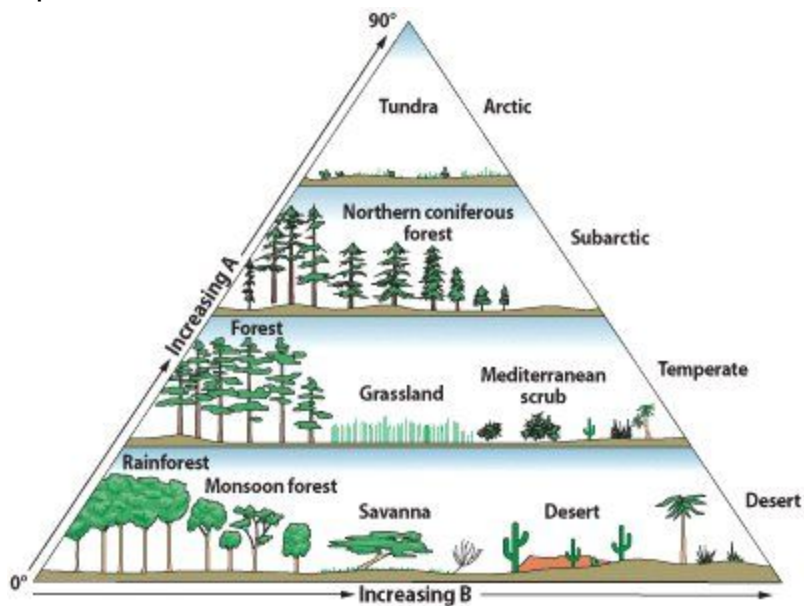
28. The figure below illustrates the Earth's major \_\_\_\_\_.



- |    |                           |
|----|---------------------------|
| a) | realms                    |
| b) | geographical environments |
| c) | biomes                    |
| d) | precipitation zones       |
| e) | ecotones                  |

Ans: c  
 Difficulty: Easy  
 Link to: 8.3

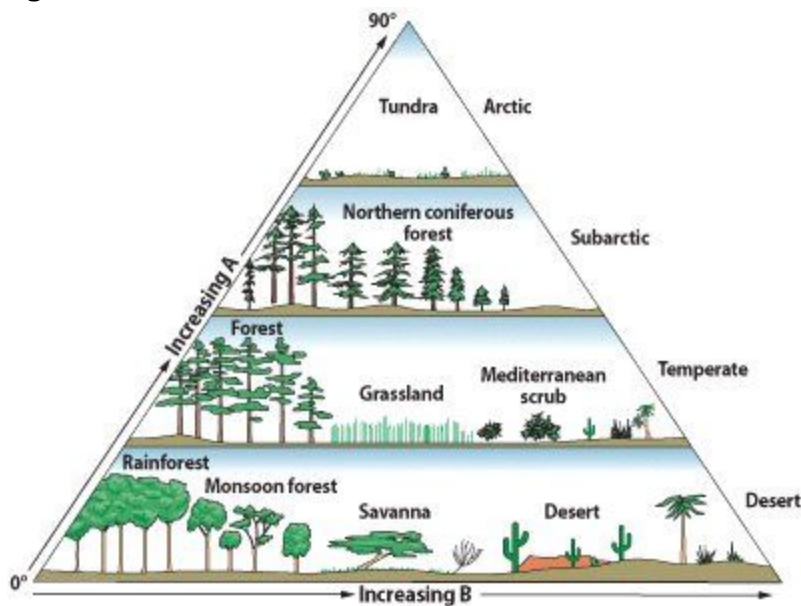
29. In the figure below, the label on the left side of the diagram (labeled "A") indicates \_\_\_\_\_ from the bottom of the triangle towards the top.



- |    |                                 |
|----|---------------------------------|
| a) | increasing latitude             |
| b) | increasing precipitation        |
| c) | increasing human modification   |
| d) | increasing aridity              |
| e) | increasing biological diversity |

Ans: a  
 Difficulty: Medium  
 Link to: 8.3

30. In the figure below, the label on the bottom of the diagram (labeled "B") indicates \_\_\_\_\_ from the left of the triangle towards the right.



- |    |                                 |
|----|---------------------------------|
| a) | increasing latitude             |
| b) | increasing precipitation        |
| c) | increasing human modification   |
| d) | increasing aridity              |
| e) | increasing biological diversity |

Ans: c  
 Difficulty: Medium  
 Link to: 8.3

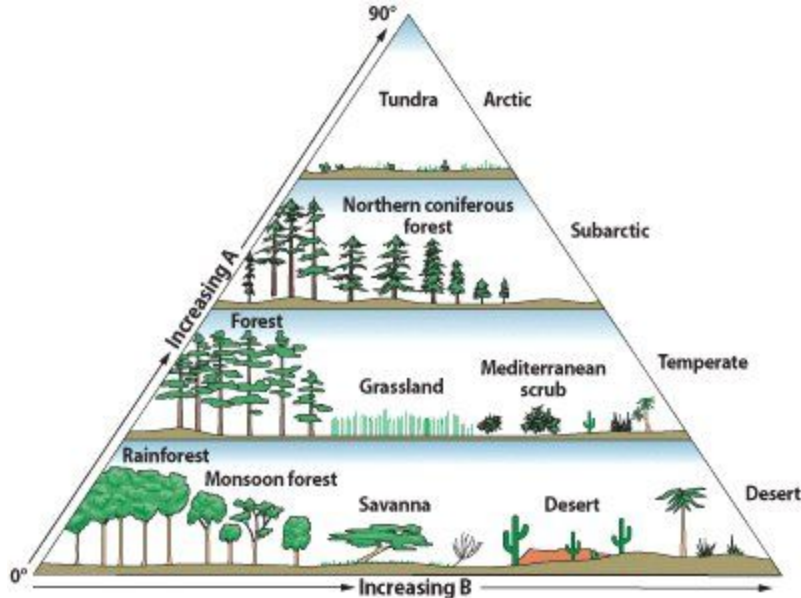
31. Which of the following is true about islands compared to larger landmasses or continents?

- |      |  |
|------|--|
| I.   | Islands have fewer species than continents |
| II.  | Islands have a greater species diversity   |
| III. | Islands have smaller extinction rates      |

- |    |                |
|----|----------------|
| a) | I only         |
| b) | II only        |
| c) | III only       |
| d) | I and II only  |
| e) | I, II, and III |

Ans: a  
 Difficulty: Medium  
 Link to: 8.5

32. In the figure below, the label on the left side of the diagram (labeled "A") indicates \_\_\_\_\_ from the bottom of the triangle towards the top. The label on the bottom of the diagram (labeled "B") indicates \_\_\_\_\_ from the left of the triangle towards the right.



Ans: increasing latitude; increasing aridity

Difficulty: Easy

Link to: 8.3

33. Why is it necessary to study the biogeography of rare species?

Ans: Because we will not be able to reintroduce rare species to former habitats if we do not study the extant of their present and past geographic distributions.

Difficulty: Medium

Link to: case study 8.1

34. Give an example of adaptive radiation.

Ans: (1) Finches on the Galapagos Islands were isolated from other species on the continents and eventually separated into several groups specialized to a distinct role  
(2) On the Hawaiian Islands a finch-like bird evolved into several species adapted for specific foods

	Difficulty: Medium Link to: 8.5
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	Use the following to answer questions 35-51:
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35.	_____ are treeless plains in areas of low annual temperatures and low rainfall.
Ans:	o
	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8

36.	Also known as boreal forest, _____ consists of forests located at high altitude or high latitude.
Ans:	b
	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8

37.	Common vegetation in the _____ biome include deciduous trees, and dominant animals tend to be small mammals, birds, and insects.
Ans:	h
	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8

38.	_____ occur in areas of moderate average annual temperatures and average annual rainfall exceeding 250 cm/yr (>100 in/yr).
Ans:	q
	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8

39.	_____ are like deciduous forests but occur in areas that are slightly more arid.
Ans:	k
	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8

40.	_____ are dominated by dense stands of low vegetation sometimes known as "chaparral" that occurs in climates with seasonally-concentrated rainfall.
Ans:	m
	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8

41.	_____ include prairies of North America, steppes of Eurasia, plains of Africa, and the pampas of South America.
Ans:	f
	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8

42.	_____ occur in areas of high temperatures and where precipitation is abundant and distributed relatively evenly throughout the year.
Ans:	p
	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8

43.	Grasslands with scattered trees are known as _____.
Ans:	d

	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8
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44.	The Gobi, Sahara, and Sonora are examples of the _____ biome.
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Ans:	c
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	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8
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45.	In the _____ biome, typical vegetation may include small trees such as mangroves, shrubs, sedges, and mosses. Animals may include mammals, reptiles, snakes, birds, as well as invertebrates such as crabs or clams.
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Ans:	a
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	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8
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46.	The _____ biome includes regions such as estuaries, rivers, and lakes.
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Ans:	n
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	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8
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47.	The _____ biome consists of areas alternately exposed to air and covered by ocean water.
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Ans:	i
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	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8
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48.	_____ is also called the pelagic region.
Ans:	l
	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8

49.	_____ refers to the bottom of the ocean.
Ans:	j
	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8

50.	_____ are marine regions where deep, cold, nutrient-rich waters rise and become available to shallow dwelling fish and other organisms.
Ans:	e
	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8

51.	In the _____ biome, sulfur-rich brines and chemosynthetic bacteria form the base of the food chain.
Ans:	g
	Reference: Ref 8-1 Difficulty: Easy Link to: 8.8

52.	About 20 years ago, an exotic seaweed named <i>Caulerpa taxifolia</i> was inadvertently flushed into the Mediterranean. <i>Caulerpa taxifolia</i> changed its growth pattern and adapted quickly to its new habitat. Explain how this could happen so quickly.
Ans:	It may have occurred through a mutation, through hybridization with a native seaweed or because its genetic code contained information that allowed for considerable plasticity



	Difficulty: Medium Link to: 8.1
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53.	Briefly discuss two differences between species or communities found on islands and those found on the adjacent mainland.	
Ans:	Communities are less diverse. Species tend to be more specialized and less "flexible" to introductions, if the island has been inhabited for a long time. Where adaptive radiation has taken place, many species may be closely related.	
	Difficulty: Easy Link to: 8.5	