Science 10: Biomes

For each of the following choose the **ONE** biome that **BEST MATCHES** the description given.

A: Tundra B: Boreal forest C: Tropical rainforest

D: Temperate deciduous forest E: Desert F: Grassland

G: Temperate rainforest H: Permanent ice

1. Penguins live in this biome. **H**
2. Trees loose their leaves in winter. **D**
3. Evergreen trees (coniferous) and cold winters (-10oC to -40oC). **B**
4. Highest biodiversity of any biome. **C**
5. Only biome that does not exist in Canada. **C**
6. Biome containing Burnaby North. **G**
7. Biome characterized by sand and cactus. **E**
8. Few trees, many grazing animals. **F**
9. Permanently frozen layer of soil. **A**

Answer the following by choosing the best letter.

1. Which of the following is an abiotic factor in a temperate rainforest?
2. Polar bears
3. Ferns
4. Moss
5. **Water (high rain fall)**
6. Deer
7. Which of the following is an example of a dominant biotic feature of a hot desert?

A. High annual average temperature.

B. Low average annual rainfall.

C. Sandy soil

D. Hot days, cold nights

**E. Cacti**

12. Which of the following is a plant adaptation to the savanna?

**A. Flexible stems to withstand high winds**

B. Dense canopy to absorb light and shade out undergrowth

C. Shallow roots due to permanently frozen soil

D. Thick bark to protect against burrowing insects

13. Which of the following is true?

1. Latitude has no effect on rainfall.
2. Biodiversity increases with increased elevation.
3. **There is higher precipitation near the coast than farther in land.**
4. The arctic region receives high precipitation during the winter months.
5. Deserts are always hot



14. Which world biome is likely represented by the data in the above climatograph?

A. Desert

B. Tundra

C. Tropical rainforest

**D. Temperate rainforest**

E. Permanent Ice

15. The kangaroo rat has an amazing physiological adaptation. It can go its entire life without drinking water. It has evolved the ability to absorb all of the water it needs from the food it eats. This adaptation best suited to which biome?

**A. Hot Desert** B. Boreal Forest C. Savanna D. Tropical rainforest

E. Temperate grassland F. Permanent Ice G. Tundra

H. Temperate rainforest I. Temperate Deciduous forest

16. This biome is characterized by evergreen trees, high rainfall and a high average annual temperature:

A. Hot Desert B. Boreal Forest C. Savanna **D. Tropical rainforest**

E. Temperate grassland F. Permanent Ice G. Tundra

H. Temperate rainforest I. Temperate Deciduous forest

17. This biome is characterized by evergreen trees, high rainfall and a moderate average annual temperature:

A. Hot Desert B. Boreal Forest C. Savanna D. Tropical rainforest

E. Temperate grassland F. Permanent Ice G. Tundra

**H. Temperate rainforest** I. Temperate Deciduous forest

18. This biome is characterized by evergreen trees, moderate precipitation, including snowy winters and a average annual temperature that ranges between -30oC in the winter and +30oC in summer:

A. Hot Desert **B. Boreal Forest** C. Savanna D. Tropical rainforest

E. Temperate grassland F. Permanent Ice G. Tundra

H. Temperate rainforest I. Temperate Deciduous forest

19. This biome is characterized by very few trees, low lying shrubs, long cold winters and a very short growing season.

A. Hot Desert B. Boreal Forest C. Savanna D. Tropical rainforest

E. Temperate grassland F. Permanent Ice **G. Tundra**

H. Temperate rainforest I. Temperate Deciduous forest

20. This biome is characterized by very low precipitation and high average daytime temperatures.

**A. Hot Desert** B. Boreal Forest C. Savanna D. Tropical rainforest

E. Temperate grassland F. Permanent Ice G. Tundra

H. Temperate rainforest I. Temperate Deciduous forest

21. Artic foxes are likely to be found primarily in which TWO biomes? (Choose two)

A. Hot Desert B. Boreal Forest C. Savanna D. Tropical rainforest

E. Temperate grassland **F. Permanent Ice** **G. Tundra**

H. Temperate rainforest I. Temperate Deciduous forest

22. Which of the following best describes a structural adaptation to life in the desert biome?

**A. Many animal have large ears that act as radiators to help them shed body heat and stay cool.**

B. Many animals burrow into the sand during the day to keep out of the sun and stay cool.

C. Many animals have adapted to be cold blooded, which requires less energy.

D. Predatory animals have sharp teeth to help kill and eat prey.

23. This biome dominates northern Africa: \_\_**Hot Desert**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

24. These biomes are only found in the northern hemisphere: \_\_\_**Boreal Forest, Tundra**\_\_\_\_\_\_\_\_\_\_\_\_

25. This biome has the LOWEST biodiversity: \_\_\_\_**Permanent Ice**\_\_\_\_\_\_\_\_

26. This biome covers most of South America and southern Asia. \_\_\_\_**Tropical Rainforest**\_\_\_\_\_\_\_\_

27. What characteristic(s) are tropical rain forests known for?

I high diversity relative to other forests

II abundance of large mammals relative to other forests

III high year-round temperatures relative to other forests

A. I only B. II only C. III only

**D. I and III only**  E. I, II, and III

**Look at the graph below and try to answer the following questions:**

****

28. What three biomes can have average annual temperatures above 30oC?

\_\_\_\_\_\_\_**Desert, Grassland, Tropical Rainforest**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

29. What biome(s) can have an average annual temperature of 10oC and average annual precipitation of 100cm?

\_\_\_\_\_\_\_\_\_\_**Temperate Deciduous Forest**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

30. What biome(s) can have an average annual temperature of 10oC and average annual precipitation of 225cm?

\_\_\_\_\_\_\_\_**Temperate Rainforest**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

31. 31. Rank tundra, boreal forest, permanent ice, temperate rainforest, and tropical rainforest in ascending (going UP from LOWEST to HIGHEST) order according to each of the following abiotic factors

a) latitude starting at the equator

**1. Tropical Rainforest 2. Temperate Rainforest 3. Boreal Forest 4. Tundra 5. Permanent Ice**

b) average annual temperature

**1. Permanent Ice 2.Tundra 3. Boreal Forest 4. Temperate Rainforest 5. Tropical Rainforest**

c) average annual precipitation

**1. Permanent Ice 2.Tundra 3. Boreal Forest 4. Temperate Rainforest 5. Tropical Rainforest**