Science 10 Mini-Provincial Name:



1) Which world biome is represented by the data in the climatograph?

A. desert

B. tundra

C. tropical rainforest

D. temperate rainforest

2) What process is responsible for providing energy to the ecosystem?

A. decomposition

B. commensalism

C. photosynthesis

D. bioaccumulation

3) Which of the following situations best explains the limited amounts of nitrogen in

agricultural land?

A. Denitrifying bacteria are scarce.

B. Decomposers remove nitrogen from the soil.

C. Bacteria that perform nitrogen fixation are rare.

D. Ammonium, nitrite and nitrate leach from the soil.

4) One atomic model represents an atom as a beehive surrounded by bees. What are represented by the beehive and the bees?



5) Which of the following elements is more reactive than sodium?

A. neon

B. lithium

C. potassium

D. magnesium

A student used three different catalysts to increase the rate at which

H2O2 decomposes into O2 and water. He filled in the Observation Chart below.



He also measured the volume of O2 produced during each reaction with

different catalysts and recorded the information on the graph below.



6) Which conclusion is supported by the observations?

A. MnO2 is the most effective catalyst.

B. Catalysts have no effect on reaction rate.

C. The reaction occurs most quickly if ZnO is added.

D. All three catalysts cause O2 to be produced at the same rate.

7) What isotope has 25 protons and 29 neutrons?

A. copper-25

B. copper-54

C. manganese-29

D. manganese-54

8) Which of the following statements describe nuclear fusion?

**I Mass is converted into energy.**

**II The reaction occurs in hydrogen bombs and in the Sun.**

**III The process divides a nucleus into two or more fragments, releasing**

**neutrons and energy.**

A. I and II only

B. I and III only

C. II and III only

D. I, II and III

9) Which of the following subatomic particles completes the nuclear reaction shown?



A. one proton

B. two protons

C. one neutron

D. two neutrons

10) A ball accelerates downwards at 9.8 m/s2 in free fall. Which of the following comparisons correctly describes the motion of the ball as it is falling?



11) A car travelling at 16 m s accelerates at 6 m/s2 for 2 s. What is its final velocity?

A. 4 m/s

B. 10 m/s

C. 22 m/s

D. 28 m/s

12) What is a tectonic plate boundary?

A. the plastic layer upon which tectonic plates move

B. the region that marks the bottom of the Earth’s crust

C. the region between tectonic plates and the asthenosphere

D. the region where tectonic plates move toward, apart or horizontally past one another

13) Which of the following factors is responsible for the movement of tectonic plates?

**I-gravity**

**II-mantle convection**

**III-heat from radioactive decay**

A. I and II only

B. I and III only

C. II and III only

D. I, II and III

**Answer Key**

1. **D**
2. **C**
3. **D**
4. **A**
5. **C**
6. **A**
7. **D**
8. **A**
9. **D**
10. **C**
11. **A**
12. **D**
13. **D**