

## Chapter 1 Quiz

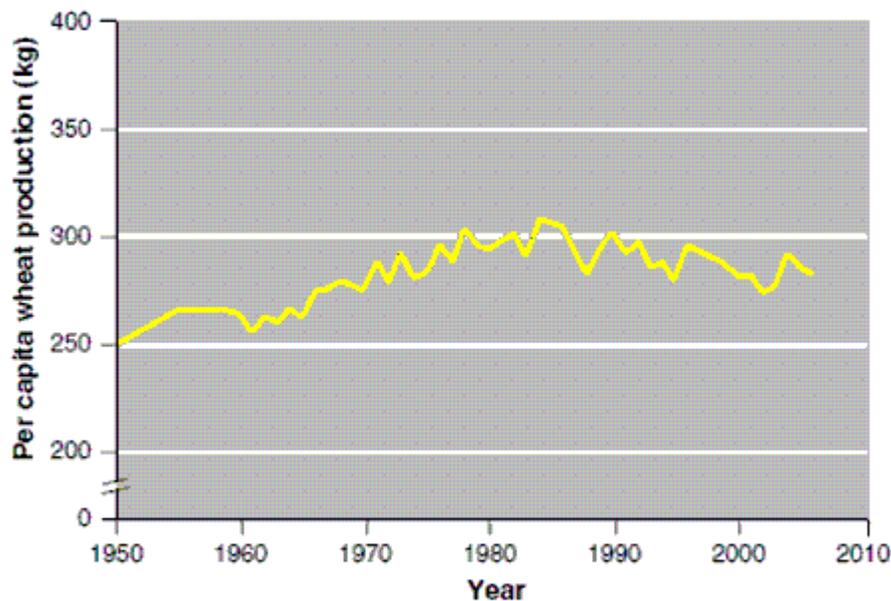
### Multiple Choice

*Identify the choice that best completes the statement or answers the question.*

- \_\_\_\_\_ 1. When we discuss “our environment” we are referring to
- All conditions in the world.
  - only interactions that affect human life.
  - only conditions that cause negative effects on our health.
  - primarily interactions that harm the atmosphere.
  - the sum of all the conditions surrounding us that influence life.
- \_\_\_\_\_ 2. Ecosystem services
- are the processes by which life supporting resources are produced.
  - can be provided by a forest.
  - can be provided by an aquifer.
  - can be provided by soil.
  - All of these answers are correct.
- \_\_\_\_\_ 3. Evidence of biodiversity is seen in the
- genetic variation among human populations.
  - number of species in a region.
  - number of ecosystems and habitats in a region.
  - variety of nutrients available in a region.
  - All of these answers are correct.
- \_\_\_\_\_ 4. The population with the greatest ability to respond to environmental change most likely is the one with
- high genetic diversity.
  - low genetic diversity.
  - one type of dominant organism.
  - two types of dominant organisms.
  - more animals than plants.
- \_\_\_\_\_ 5. The number of species on Earth that have been identified is approximately
- 10 billion
  - 1 billion
  - 100 million
  - 2 million
  - 100,000
- \_\_\_\_\_ 6. The health of frog populations is used as an indicator of environmental health because frogs
- are exposed to the water.
  - are amphibious.
  - eat insects which are very low on the food chain.
  - live in the tropics.
  - may ingest toxins on land.

- \_\_\_\_\_ 7. Two square km is equal to \_\_\_\_\_ square meters.
- 200,000
  - 2,000,000
  - 20,000,000
  - 200,000,000
  - 2,000,000,000

**Figure 1-1**



- \_\_\_\_\_ 8. Use Figure 1-1. According to the figure above, which of the following statements about the overall trends in per capita wheat production is correct?
- Per capita wheat production increased from 1950 through the mid-1980's and then started to decrease.
  - There is no discernible trend.
  - Between 1950 and 1960, per capita wheat production was stable and then decreased through 2005.
  - Per capita wheat production has not changed since the 1950's.
  - Per capita wheat production has steadily increased since the 1950's through today.
- \_\_\_\_\_ 9. Factors that are responsible for grain production not keeping up with worldwide population include
- crop diseases.
  - soil degradation.
  - use of food crops for fuel.
  - government encouragement to let land remain uncultivated.
  - All of these answers are correct.
- \_\_\_\_\_ 10. The concentration of carbon dioxide in the atmosphere
- is increasing in part due to fossil fuel use.
  - has not significantly changed in the past 200 years.
  - is increasing in part due to deforestation.
  - has been decreasing since the 1800's.
  - both a and c.

- \_\_\_ 11. Human population today is closest to
- 3 billion.
  - 5 billion.
  - 6 billion.
  - 7 billion.
  - 12 billion.
- \_\_\_ 12. The following are non-renewable resources except
- aluminum.
  - oil.
  - coal.
  - copper.
  - timber.
- \_\_\_ 13. Economic development goes hand in hand with
- decreased use of non-renewable resources.
  - increased consumption of resources.
  - smaller more efficient living styles.
  - better planting strategies for crops.
  - sustainable use of renewable resources.
- \_\_\_ 14. \_\_\_ % of the world's most developed population consumes \_\_\_ % of the world's energy.
- 20; 58
  - 20; 20
  - 10; 90
  - 2; 75
  - 2; 95
- \_\_\_ 15. If land is cleared at a rate of 456 hectares per week, approximately how many acres per year that are being cleared?
- 16,5000
  - 180
  - 9500
  - 66,400
  - 58,600
- \_\_\_ 16. Sustainable development
- was demonstrated on Easter Island.
  - requires resources to be saved and stored for one generation.
  - is achieved when food is raised by the people who are eating it.
  - balances human needs and economic development.
  - Allows for clear-cutting of trees.
- \_\_\_ 17. The following are examples of sustainable practices.
- Forests cut for timber are replanted
  - Steel is recycled.
  - Plastic is disposed of in landfills because that it is less expensive than recycling.
- I only.
  - II only.
  - I and III only.
  - I and II only.
  - I, II, and III.

- \_\_\_\_\_ 18. Sustainable development would incorporate
- the development of alternative materials.
  - efficient use of energy.
  - replacement of nutrients in soil.
  - evaluation of residential patterns.
  - All of these answers are correct.
- \_\_\_\_\_ 19. Calculating ecological footprint involves consideration of
- the impact of activities on the resources of Earth.
  - lifestyle.
  - water usage for crops and direct consumption.
  - food calories required for continuing normal activity.
  - All of these answers are correct.

### Passage 1-1

*An experiment is set up to determine if wheat grows better when it is planted by itself or together with clover. The setup involves 3 pans of each treatment. Set-up A, B and C contain wheat alone. Set-ups D, E and F contain clover and wheat planted together, in rows alternating one seed of each type. One hundred seeds are planted in each pan. all treatments contain the same type of soil, are planted in the same size of pan, are exposed to the same amount of sunlight, and are maintained at the same temperature throughout the course of the experiment.*

- \_\_\_\_\_ 20. Use Passage 1-1. The treatments planted with wheat alone are the
- constant.
  - controls.
  - independent variable.
  - dependent variable.
  - replication.
- \_\_\_\_\_ 21. Use Passage 1-1. The following statement provides a hypothesis for this experiment :
- Wheat grows taller when planted by itself than when it is alternated with clover.
  - Clover grows better when planted by itself
  - Wheat grows better when planted together with clover.
  - Clover grows better when planted together with wheat.
  - Both a and c are legitimate hypotheses for this experiment.
- \_\_\_\_\_ 22. Use Passage 1-1. Several setups of each treatment are prepared to fulfill a very important requirement of scientific experimentation, specifically the need for
- replication.
  - constants.
  - a control.
  - an independent variable.
  - a dependent variable.
- \_\_\_\_\_ 23. Use Passage 1-1. Constants in this experiment are
- the pan of wheat, temperature, soil type.
  - temperature, number of seeds in each pan, sunlight.
  - number of seeds in each pan, sunlight, one pan of wheat and clover.
  - the pans of wheat alternated with clover.
  - the same as the independent variable.

- \_\_\_ 24. Use Passage 1-1. The dependent variable in this experiment could be the
- height of the clover.
  - number of leaves on the clover.
  - height of the wheat.
  - presence of nodules on the roots of the clover.
  - number of clover seeds that germinate.
- \_\_\_ 25. When studies are done to determine the effect of pesticides on humans,
- human subjects are used to test the pesticides.
  - the health of similar groups of people who have not been exposed to the pesticides are used as a basis for comparison.
  - it is very difficult to find more than a single person exposed.
  - higher primates are tested because their systems are close to those of humans.
  - Both a and b.
- \_\_\_ 26. The death of a billion fish in the Neuse River of North Carolina in 1991 was caused by
- sediment.
  - bacteria.
  - overfishing the food source of the fish.
  - Pfiesteria*.
  - acid rain.
- \_\_\_ 27. Inductive reasoning
- is the process of making general statements from specific facts.
  - is the process of applying a general statement to specific facts.
  - doesn't require facts.
  - is the same thing as a hypothesis.
  - is the same thing as observation.
- \_\_\_ 28. The study of environmental science differs from study of the natural sciences such as biology and chemistry because it
- doesn't encourage critical thinking.
  - isn't included in most institutions of higher learning.
  - involves politics, law and economics.
  - eliminates the consideration of physics.
  - doesn't take into account the scientific process.
- \_\_\_ 29. Environmental justice is
- the body of law that deals with environmental issues.
  - the type of legal system that environmental lawyers use to defend nature.
  - a social movement that works toward equal enforcement of environmental laws in poor communities.
  - a type of legal punishment for polluters.
  - not needed because pollution is equitably distributed around the world.
- \_\_\_ 30. Controlled experiments in nature are difficult because
- it is impossible to determine what kind of conditions are needed for the experiment.
  - large amounts of land are sometimes required to produce natural conditions.
  - animals cannot be studied because they do not stay still.
  - scientists do not like to do the fieldwork required.
  - Both a and b.

## Chapter 1 Quiz Answer Section

### MULTIPLE CHOICE

1. ANS: E	PTS: 1	DIF: M	MSC: Concept based
2. ANS: E	PTS: 1	DIF: E	MSC: Concept based
3. ANS: E	PTS: 1	DIF: E	MSC: Critical thinking
4. ANS: A	PTS: 1	DIF: E	MSC: Critical thinking
5. ANS: D	PTS: 1	DIF: E	MSC: Fact based
6. ANS: B	PTS: 1	DIF: E	MSC: Fact based
7. ANS: B	PTS: 1	DIF: M	MSC: Analytical thinking
8. ANS: A	PTS: 1	DIF: M	MSC: Analytical thinking
9. ANS: E	PTS: 1	DIF: E	MSC: Concept based
10. ANS: E	PTS: 1	DIF: E	MSC: Fact based
11. ANS: D	PTS: 1	DIF: E	MSC: Fact based
12. ANS: E	PTS: 1	DIF: E	MSC: Concept based
13. ANS: B	PTS: 1	DIF: E	MSC: Concept based
14. ANS: A	PTS: 1	DIF: M	MSC: Fact based
15. ANS: E	PTS: 1	DIF: M	MSC: Analytical thinking
16. ANS: D	PTS: 1	DIF: M	MSC: Concept based
17. ANS: D	PTS: 1	DIF: E	MSC: Critical thinking
18. ANS: E	PTS: 1	DIF: E	MSC: Critical thinking
19. ANS: E	PTS: 1	DIF: E	MSC: Concept based
20. ANS: B	PTS: 1	DIF: E	MSC: Critical thinking
21. ANS: C	PTS: 1	DIF: M	MSC: Critical thinking
22. ANS: A	PTS: 1	DIF: M	MSC: Critical thinking
23. ANS: B	PTS: 1	DIF: E	MSC: Critical thinking
24. ANS: C	PTS: 1	DIF: E	MSC: Critical thinking
25. ANS: B	PTS: 1	DIF: M	MSC: Fact based
26. ANS: D	PTS: 1	DIF: E	MSC: Fact based
27. ANS: A	PTS: 1	DIF: M	MSC: Definitional
28. ANS: C	PTS: 1	DIF: E	MSC: Fact based
29. ANS: C	PTS: 1	DIF: M	MSC: Definitional
30. ANS: B	PTS: 1	DIF: M	MSC: Concept based