

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

- 1) Monoculture \_\_\_\_\_.
  - A) farming is illegal in most countries
  - B) describes diets low in protein, such as vegetarianism
  - C) farming is a food-growing practice that uses no synthetic fertilizers or pesticides
  - D) describes the farming practice of growing large stands of a single species
  - E) describes food that has not been genetically modified
  
- 2) Recombinant DNA \_\_\_\_\_.
  - A) describes the merging of DNA from unrelated organisms to create new hybrids
  - B) was part of the green revolution of the 1960s
  - C) describes pollination of one plant by another of the same species
  - D) is assembled in the lab from mononucleotides
  - E) describes pollination of one plant by another of a different species
  
- 3) What is true about GM crops?
  - A) Latin America leads the world in land area dedicated to GM crops.
  - B) Europe leads the world in land area dedicated to GM crops.
  - C) They are unanimously favored by environmentalists.
  - D) The United States leads the world in land area dedicated to GM crops.
  - E) They are unanimously opposed by environmentalists.
  
- 4) Raising \_\_\_\_\_ requires the most land and water.
  - A) beef cattle
  - B) goats
  - C) chickens
  - D) dairy cattle
  - E) pigs
  
- 5) Golden rice \_\_\_\_\_.
  - A) is resistant to most insects
  - B) is a GM variety that contains vitamin A
  - C) is presently grown only in Europe
  - D) is an invasive species
  - E) is resistant to herbicides
  
- 6) Which of the following requires the least land to produce 1 kg of protein?
  - A) beef
  - B) eggs
  - C) chicken
  - D) milk
  - E) pork

- 7) Which of the following is true?
- A) World hunger has increased significantly since 1970.
  - B) The main reason why people are undernourished is because they are not educated about proper nutrition.
  - C) Aquaculture has decreased significantly since 1985.
  - D) Paul Ehrlich predicted catastrophic failure of agricultural systems.
  - E) World grain production has increased significantly since 1985.
- 8) \_\_\_\_\_ % of the food we consume comes from \_\_\_\_\_ crop species.
- A) 90; 100
  - B) 10; 100
  - C) 50; 50
  - D) 90; 15
  - E) 50; 20
- 9) Since 1960, pesticide use has risen \_\_\_\_\_ worldwide.
- A) fivefold
  - B) fourfold
  - C) threefold
  - D) twofold
  - E) sixfold
- 10) Which of the following best describes integrated pest management (IPM)?
- A) continuous monoculture cropping and harvesting
  - B) biocontrol measures, crop rotation, habitat diversification
  - C) major reliance on synthetic pesticides
  - D) subsidies for pesticide use
  - E) transgenic crops
- 11) Recombinant DNA \_\_\_\_\_.
- A) contributes to pollution
  - B) creates transgenic organisms
  - C) was developed in the 1940s
  - D) has no real environmental disadvantages
  - E) presently is not approved by the FDA
- 12) The European Union nations \_\_\_\_\_.
- A) have refused to allow synthetic pesticides to be used non exported crops
  - B) produce so little food that they have to import most meats and vegetables
  - C) along with Canada, Brazil and Argentina have developed and planted many GM crops
  - D) have converted all farms to organic agriculture
  - E) do not support the growth of GM crops

- 13) Organic farming \_\_\_\_\_.
- A) has no national standards in the United States
  - B) is presently limited to crops of fruits and vegetables
  - C) has increased in the United States, Canada and Europe in recent years
  - D) failed in Cuba in the 1980s
  - E) began in the 1960s
- 14) The Cartagena Protocol on Biosafety \_\_\_\_\_.
- A) outlines regulations on international trade of GM foods
  - B) was signed by the United States
  - C) regulates the creation of GM foods
  - D) regulates trading of endangered species
  - E) prohibits irradiation of food crops
- 15) Seed banks are important for \_\_\_\_\_.
- A) loans to developing countries
  - B) cash deposits for developing countries
  - C) protecting monoculture productivity
  - D) protecting genetic diversity
  - E) providing farmers with the current year's GM crops
- 16) It is more energetically efficient for us to eat more \_\_\_\_\_.
- A) foods grown using IPM methods
  - B) herbivorous animals like cattle and chicken
  - C) carnivorous animals like fish and alligator
  - D) GM foods
  - E) plant-based foods
- 17) In order for livestock to be considered organic \_\_\_\_\_.
- A) animals cannot be transferred from regular treatment to organic standards
  - B) animals must be reared under natural conditions in intact ecosystems
  - C) animals must be fed 100% organic agricultural feed
  - D) hormones and antibiotics are permitted, but not vaccines
  - E) no vitamins and mineral supplements can be used

18) Which is NOT a characteristic of subsistence farming?

- A) labor intensive.
- B) most common approach in rural populations.
- C) small plots.
- D) low technology.
- E) dependable cash income.

19) Malnutrition is defined as a lack of:

- A) adequate food energy.
- B) a minimum number of calories.
- C) food grains.
- D) a varied diet.
- E) essential vitamins and minerals.

20) The root cause of hunger is:

- A) lack of adequate food production.
- B) overexploitation of the environment.
- C) inadequate global food reserves.
- D) poverty.
- E) climatic conditions, such as drought.

21) Which of the following was a consequence of the Green Revolution in developing countries?

- A) it reduced deforestation and the need for additional land clearing for farming.
- B) it reduced the need for fertilizers and other agricultural chemicals.
- C) it benefited both large and small farms equally.
- D) it increased the amount of land in cultivation.
- E) it contributed little to overall food production.

22) In the United States, \_\_\_\_\_ of grain crops are grown to feed domestic animals.

- A) 20 percent.
- B) 50 percent.
- C) 90 percent.
- D) 70 percent.
- E) 5 percent.

23) Which of the following best contrasts genetic engineering with conventional plant breeding?

- A) it can only be used to exchange genes among plants.
- B) it takes a long time before new varieties can be introduced commercially.
- C) it allows the exchange of genes among bacteria, plants, and animals.
- D) it allows the transfer of genes from plants to other plants.
- E) it is of limited value to the improvement of agricultural crops.

- 24) Which of the following would destabilize global food security?
- A) military conflict.
  - B) just land distribution.
  - C) expansion of sustainable agriculture.
  - D) promotion of a market economy.
  - E) development of effective safety nets.
- 25) The growth in world trade as a result of the Industrial Revolution affected agriculture by:
- A) reduced dependency on developed nations for food.
  - B) reducing the need for self-sufficiency in food production.
  - C) increasing the need for self-sufficiency in food production.
  - D) creating a safety net to deal with unexpected food shortages.
  - E) increased the size of global food reserves.
- 26) Critics of using genetically modified organisms as food crops warn of which of the following dangers?
- I Introduction of new allergens into the food supply
  - II Loss of genetic diversity in food crops
  - III Decreases in food production worldwide
- A) I only                      B) II only                      C) III only                      D) I and II                      E) I and III
- 27) Which of the following statements best describes the pesticide treadmill?
- A) Broad-spectrum pesticides degrade into selective pesticides, thereby killing a wide range of insect pests over a long period.
  - B) Pesticides accumulate in the fatty tissues of consumers and increase in concentration as they move up the food chain.
  - C) Some pest populations evolve resistance to pesticides, which become less effective over time, so that new pesticides must be developed.
  - D) Beneficial insects and natural predators are killed at a faster rate than the pest insects.
  - E) Testing of the toxicity of pesticides to humans cannot keep pace with the discovery and production of new pesticides.
- 28) In which of the following ways did the Green Revolution increase food production?
- I The development of disease-resistant and high-yielding crop plants
  - II Monocropping and the widespread use of machinery
  - III The application of fertilizers and the use of irrigation techniques
- A) I only                      B) II only                      C) III only                      D) I and III                      E) I, II, and III

- 29) It has been projected that aquaculture could supply about one-half the global demand for seafood by 2025. However, future production through aquaculture could be limited because
- A) concentrated waste from aquaculture facilities contaminates rivers and oceans.
  - B) raising fish in a protected environment could lead to a fish population overshoot.
  - C) the economies of developing countries would be negatively affected.
  - D) ocean fishing operations would go out of business.
  - E) The ITQ system would prohibit their expansion.
- 30) Which of the following is not an environmental or health problem that has been associated with CAFOs?
- A) The increase of antibiotic-resistant bacteria potentially harmful to humans
  - B) The overgrazing of large tracts of land
  - C) The runoff of animal wastes into natural waters
  - D) The production of huge quantities of manure, creating a waste disposal problem
  - E) The use of grain as feed, reducing the food supply available to humans

## Answer Key

### Testname: CHAPTER 10 QUIZ

- 1) D
- 2) A
- 3) D
- 4) A
- 5) B
- 6) C
- 7) D
- 8) D
- 9) B
- 10) B
- 11) B
- 12) E
- 13) C
- 14) A
- 15) D
- 16) E
- 17) C
- 18) E
- 19) E
- 20) D
- 21) A
- 22) D
- 23) C
- 24) A
- 25) B
- 26) D
- 27) C
- 28) E
- 29) A
- 30) B