AP Environmental Science: Unit – 3 -Population Practice Test

Question 1

Which of the following leads to a decrease in birthrates among women?

    A. Higher Education
    B. High Infant Mortality Rate
    C. No Prenatal Care
    D. No contraceptives

Question 2

All of the following are characteristics of R selected species except

    A. No prenatal care
    B. Short Lifespan
    C. Early reproductive age
    D. Few Offspring

Question 3

The number of individuals an environment can support is known as the

    A. Total Fertility Rate
    B. Exponential Growth
    C. Limiting Factor
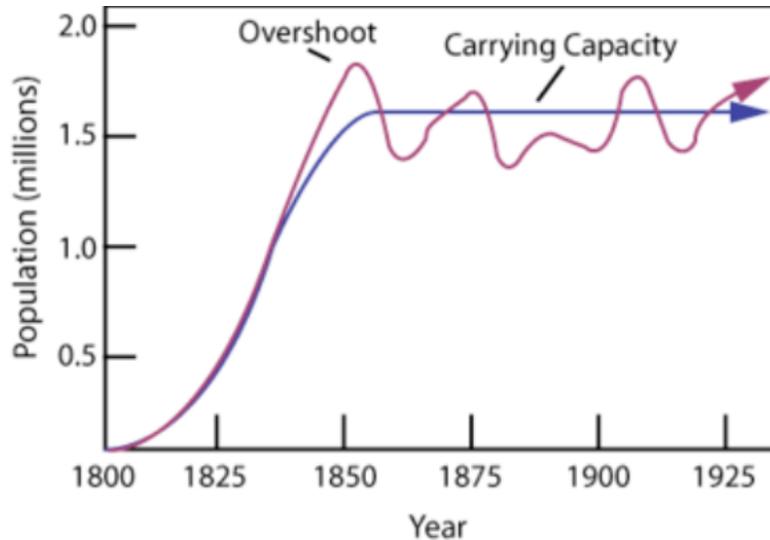   D. Carrying Capacity

Question 4

A small community started out with 10 people in year 1. During Year 1, they had 10 births and 5 deaths. What was this community's growth rate for Year 1?

    A. 50%
    B. 5%
    C. 75%
    D. 1.5%

Question 5

In what year did exponential growth start to occur for the population on the graph?

A. **1850**
B. **1900**
C. **1825**
D. **1800**

Question 6

Which statement about human population growth is LEAST likely to be correct?

A. Modern medicine has allowed human populations to extend well past the earth's carrying capacity, as more people survive for longer.
B. Technological advances in farming and medicine will allow human populations to continue to grow without natural limits.
C. Advances in agriculture have allowed the world's food supply to expand dramatically in the last 100 years.
D. Worldwide, humans are reproducing more quickly than mortality is removing people from the population.

Question 7

In a population of spiders there are three different sizes: small, medium, and large.
---The large spiders are easily seen by predators.
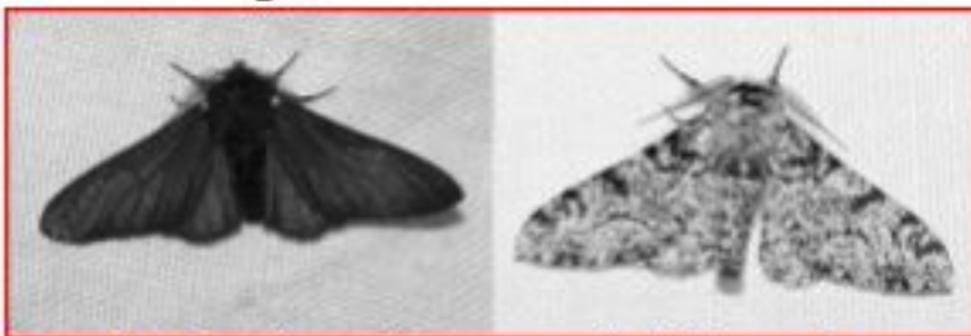**---Small spiders have a difficult time finding food.**
What will most likely happen to this population of spiders after many generations?

Small Variant	Medium Variant	Large Variant

    A. Small and large spiders will mutate
    B. Medium spiders will be the most plentiful
    C. Large spiders will learn to hide from predators
    D. Small and medium spiders will be the least plentiful

Question 8

The habitat of a moth species included trees with both light and dark colored bark. Therefore the moth species included both light and dark colored variants. Then the light-colored trees were wiped out by a disease, and within a few years nearly all the moths in this forest were dark colored. Which of the following choices BEST explains what happened?
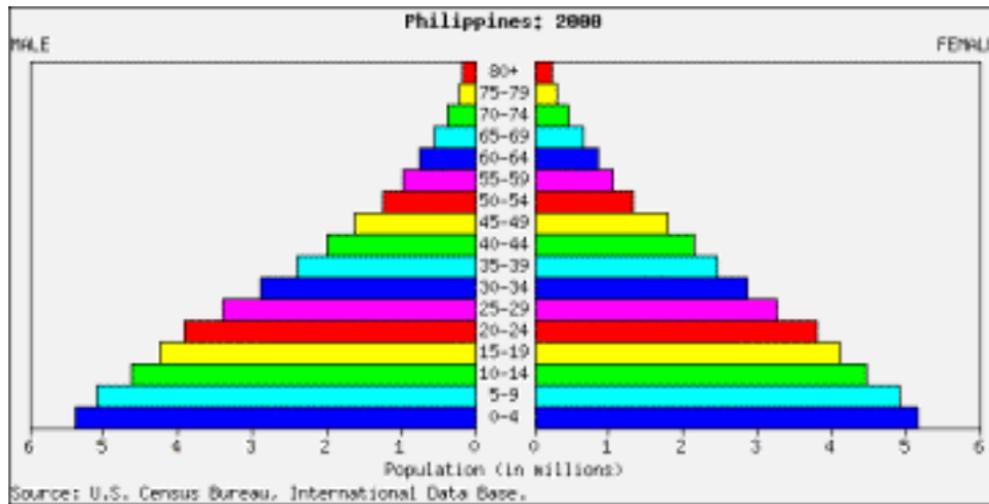

    A. The light moths that survived all had dark offspring in order to adapt to the change.
    B. The dark moths were less visible to predators, so mostly light moths were eaten.
    C. The few light moths that survived did not mate, and therefore they had no offspring.

D. The light moths changed their wing pigments to darker colors to avoid being eaten.
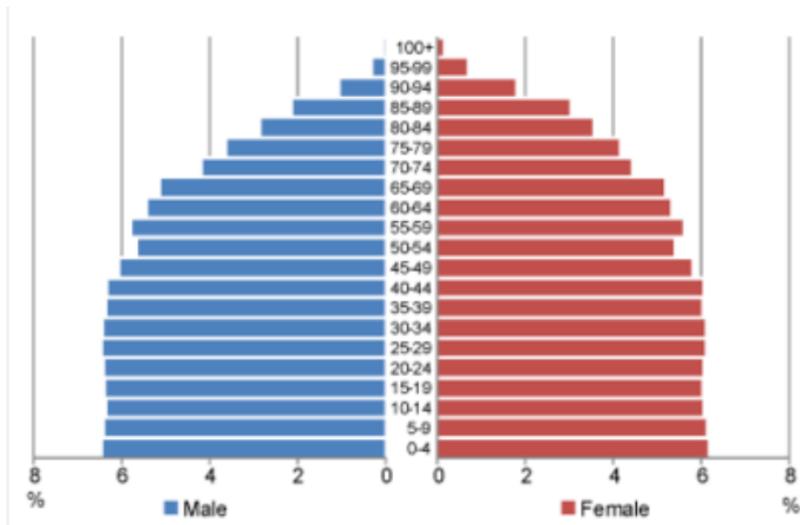
Question 9

According to the population pyramid of this country, its population is most likely

A. growing slowly.
B. growing rapidly.
C. decreasing.
D. not changing.

Question 10

What kind of growth is this country experiencing?

A. Exponential Growth
B. Stable Growth
C. Declining Growth

Question 11

A variable that influences an individual's probability of survival and reproduction in a manner that depends on the size of the population is known as

A. Carrying capacity
B. Limiting resource
C. Density-independent factor
D. Density-dependent factor
E. Age structure

Question 12

A country with a greater number of younger people than older people has an age structure diagram that resembles which of the following?

A. a pyramid
B. a colum
C. an inverted pyramid
D. an inverted column
E. a kite

Question 13

According to the theory of demographic transition, a country in phase 1 demographic transition will experience which of the following?

    A. declining population growth
    B. stable population growth
    C. rapid population growth
    D. slow population growth
    E. slow population growth

Question 14

In a Type I survivorship curve, the number of survivors remains stable, but eventually decreases sharply at a particular upper age limit. In a Type II survivorship curve, the number of survivors steadily decreases proportionally with an increase in age.

Which of the following inferences can be drawn from the descriptions of survivorship curves provided above?

    A. Type I could represent a house mouse, which is a typical r-selected species.
    B. Type II could be the average of r-selected and K-selected species in a specific area.
    C. Type II could represent elephants, which are typical K-selected species.
    D. Type I could represent an oak tree species that experiences very low survivorship early and late in life.
    E. Type II could represent a coral species that exhibits a constant decline in survivorship throughout its life.

Question 15

A country has a Net Immigration Rate of 3 per 1,000; a Crude Birth Rate (CBR) of 9 per 1,000; and a Crude Death Rate (CDR) of 11 per 1,000. What is the growth rate of this country?

    A. 0.1%
    B. 0.2%
    C. 0.5%
    D. 1%
    E. 2%

Question 16

Which of the following describes the shape of the logistic growth model with time as the independent variable and population growth as the dependent variable?

    A. Parabolic-shaped curve
    B. J-shaped curve
    C. S-shaped curve
    D. Straight line
    E. U-shaped curve

Question 17

Which of the following is an r-adapted species?

    A. Elephants
    B. Mice
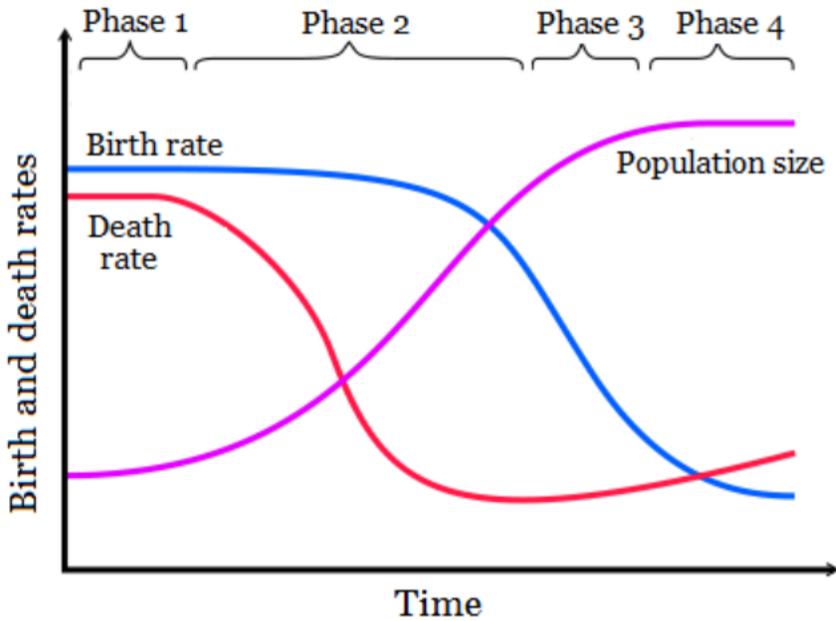   C. Gorillas
    D. Wolves
    E. Whales

Question 18

The average number of offspring required to offset the average number of deaths in a population so that the population remains stable is referred to as:

    A. Crude birth rate
    B. Crude death rate
    C. Replacement level fertility
    D. Total fertility rate
    E. Infant mortality

Question 19

Refer to the graph below.

Phase 1   Phase 2   Phase 3   Phase 4

Birth rate

Death rate

Population size

Birth and death rates

Time

During which phase(s) of the demographic transition does the death rate decline while the birth rate remains high, and the population grows rapidly?

A. Phase 1
B. Phase 2
C. Phase 3
D. Phase 4
E. Phase 1 and 2

Answer Key

1. A
2. D

3. D
4. A
5. C
6. B
7. B
8. B
9. B
10. B
11. D
12. A
13. D
14. E
15. A
16. C
17. B
18. C
19. B