Multiple Choice Questions

 On a population growth curve, the	_ phase results in the same
2 Which of the following is the correct sequence of phases in a	typical population growth
curve?	typical population growth
A. stable equilibrium, exponential, lag	
<u>B.</u> lag, exponential, stable equilibrium	
C. lag, stable equilibrium, exponential	
D. stable equilibrium, lag, exponential	
2.	
3. Which phase of a population growth curve is characterized b	y very slow growth due to
reproduction and offspring growth?	
<u>A.</u> lag phase	
B. exponential phase	
C. biotic potential phase	
D. stable equilibrium phase	

4. The human population growth curve is currently in which phase?

- A. death phase
- B. lag phase
- C. stable equilibrium
- **<u>D.</u>** exponential growth

5. In a bacterial growth curve, the population follows a typical growth curve until

- <u>A.</u> waste products become lethal.
- B. raw materials are depleted.
- C. they encounter a lag phase.
- D. there is predation.

6. Terms used to describe factors (or sets of factors) that limit population size (limiting factors) include

- A. extrinsic and intrinsic.
- B. density-dependent and independent.
- C. environmental resistance.
- **D.** All of these are correct.

7. Factors that control populations that come from outside the population are known as

- <u>A.</u> extrinsic limiting factors.
- B. intrinsic limiting factors.
- C. environmental resistance
- D. density dependant limiting factors.

8. Ecologists refer to the maximum sustainable population for an area as

- A. exponential growth.
- B. lag phase.
- <u>**C.**</u> carrying capacity.
- D. None of these are correct

9. In the real world, many organisms don't "fit" clearly into either the r-strategist or K-strategist category for

A. population reproductive strategies.

- B. human growth factors.
- C. population growth curves.
- D. intrinsic reproduction.

10. Which condition is necessary for a population to grow?

- A. Stabilization must occur.
- B. Mortality must exceed natality.
- C. Birthrate must exceed death rate.
- D. Carrying capacity must occur.

11. When a population stops growing and its size no longer fluctuates, it is said to

- <u>A.</u> be at stable equilibrium.
- B. be at the death phase.
- C. be at the lag phase.
- D. have met its biotic potential.

12. A measure of the land area required to provide the resources and absorb the wastes of a population is referred to as the

<u>A.</u> ecological footprint.

- B. ecological impact.
- C. human impact.
- D. human dependant footprint.

13. Which of the following limiting factors is NOT a component of environmental resistance?

- A. availability of raw materials
- **<u>B.</u>** organismal biotic potential
- C. availability of energy
- D. accumulation of waste products
- E. All of these are correct.

14. Which organism is affected the most by the accumulation of waste?

- A. humans
- B. plants
- C. small rodents
- <u>**D.**</u> bacteria

- 15. K-strategists are
- A. large and long-lived.
- B. small and long-lived.
- C. controlled by density-dependent factors.
- D. large and short-lived.
- **<u>E.</u>** large and long-lived and controlled by density-dependent factors.
- F. None of these are correct.

16. Which of the following is NOT an environmental factor limiting population size?

- A. disease
- B. predation
- <u>**C.**</u> biotic potential
- D. space

17. Which of the following countries has the lowest population growth rate?

- A. China
- B. Mexico
- C. India
- **D.** Sweden

18. Deer invest a great deal of energy in a few offspring that have a good chance of living to reproduce. They are said to be

- A. density-independent.
- **<u>B.</u>** K-strategists.
- C. replacement fertile
- D. r-strategists.

19. Oysters produce a million eggs of which only a few find suitable habitat to live. They are said to be

- A. density-dependent.
- B. K-strategists.
- <u>**C.**</u> r-strategists.
- D. near carrying capacity.

20. Which organism was introduced into the Great Lakes and has expanded its range to the Mississippi River?

A. zebra mussel

- B. razor clam
- C. small darter
- D. starlings

21. As a result of the ban on international trade of elephant products,

- A. the elephant population has declined.
- B. the antelope population has declined.
- C. native peoples have starved from famine.
- **<u>D.</u>** the elephant population has exploded.

22. If the human population continues to grow at its current rate, it is expected to double to _____ by the year 2060.

- A. 12 billion
- B. 10 billion
- C. 15 billion
- D. 25 billion
- 23. Which of the following factors may cause a population to grow?
- A. lower birthrate than death rate
- **<u>B.</u>** higher birthrate than death rate
- C. low immigration
- D. higher ratio of post-reproductive females
- 24. Populations of r-strategists will be most affected by
- A. density-dependent factors.
- B. density-independent factors.

- 25. The current (2004) human population is about
- A. 4.6 billion.
- **<u>B.</u>** 6.4 billion.
- C. 4 billion.
- D. 10 billion.

26. The Red-Cockaded Woodpecker is an endangered species primarily due to

- A. over hunting by sportsmen.
- **<u>B.</u>** commercial logging of mature pine trees which are required for nesting.
- C. competition with a rival species called the Yellow-Bellied Sapsucker.
- D. deaths resulting from the introduction of an avian disease by migratory birds.

27. Auburn University was selected as an academic partner in the The War on Hunger Campaign by the

- A. Food and Drug Administration.
- B. National Association of Colleges.
- <u>C.</u> United Nations World Food Program.
- D. United States Department of Agriculture.

28. One of the targets of The United Nations Millennium Development Goals is to decrease the proportion of people lacking access to safe drinking water and basic sanitation by

- A. 100%.
- B. 10%.
- C. 25%.
- <u>**D.**</u> 50%.

Which of the following best matches the description?

29. Phase in a population growth pattern in which the death rate and birthrate become equal.

- <u>A.</u> stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- D. carrying capacity
- E. r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- O. emigration
- P. immigration

30. Limiting factors that become more severe as the size of the population increases.

- A. stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- D. carrying capacity
- E. r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- O. emigration
- P. immigration

31. Limiting factors that are not affected by population size.

- A. stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- D. carrying capacity
- E. r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- O. emigration
- P. immigration

32. Combination of all environmental influences that tend to keep populations stable.

- A. stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- D. carrying capacity
- E. r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- O. emigration
- P. immigration

33. Movement out of an area that was once one's place of residence.

- A. stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- D. carrying capacity
- E. r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- **O.** emigration
- P. immigration

34. Small organism that has a short life span and produces a large number of offspring.

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- A. stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- D. carrying capacity
- <u>E.</u> r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- O. emigration
- P. immigration

35. Measure of how close organisms are to one another.

- A. stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- D. carrying capacity
- E. r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- **<u>I.</u>** population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- O. emigration
- P. immigration

36. Comparative percentages of different age groups within a population.

- A. stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- D. carrying capacity
- E. r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- <u>N.</u> age distribution
- O. emigration
- P. immigration

- 37. Inherent reproductive capacity.
- A. stable equilibrium phase
- B. exponential growth phase
- **<u>C.</u>** biotic potential
- D. carrying capacity
- E. r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- O. emigration
- P. immigration

38. Optimum number of individuals of a species that can be supported in an area over an extended period of time.

- A. stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- **<u>D.</u>** carrying capacity
- E. r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- O. emigration
- P. immigration

39. Portion of the population growth curve that shows the population declining.

- A. stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- D. carrying capacity
- E. r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- O. emigration
- P. immigration

40. Period of population growth when the population increases at an ever-increasing rate.

- A. stable equilibrium phase
- **B.** exponential growth phase
- C. biotic potential
- D. carrying capacity
- E. r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- O. emigration
- P. immigration

41. Initial phase of population growth during which growth occurs very slowly.

- A. stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- D. carrying capacity
- E. r-strategist
- **<u>F.</u>** lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- O. emigration
- P. immigration

42. Large organism that has a long life span and produces few offspring.

- A. stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- D. carrying capacity
- E. r-strategist
- F. lag phase
- <u>G.</u> K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- O. emigration
- P. immigration

43. Migration of organisms from a concentrated population into areas with lower population densities.

NA.OK

- A. stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- D. carrying capacity
- E. r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- <u>M.</u> dispersal
- N. age distribution
- O. emigration
- P. immigration

44. Movement of organisms into a different region.

- A. stable equilibrium phase
- B. exponential growth phase
- C. biotic potential
- D. carrying capacity
- E. r-strategist
- F. lag phase
- G. K-strategist
- H. environmental resistance
- I. population density
- J. density-dependent limiting factor
- K. death phase
- L. density-independent factor
- M. dispersal
- N. age distribution
- O. emigration
- **<u>P.</u>** immigration

Survey Questions

45. A typical population growth curve shows an exponential growth phase followed by a lag phase.

Answer: FALSE

46. A population is a group of different species that inhabit a specific area. Answer: FALSE

47. Natality measures the number of individuals that die in a population over a period of time. Answer: FALSE

48. The introduction of genetic and cultural characteristics into an existing population is called emigration. Answer: FALSE

49. K-strategist populations generally do not reach carrying capacity but rather crash because of density-dependent limiting factors.

Answer: FALSE

50. Predation and parasitism are important in determining population size. Answer: TRUE

51. Age distribution and sex ratio have little impact on population growth. Answer: FALSE

52. Available raw materials are one of the limiting factors regulating carrying capacity. Answer: TRUE

53. Most organisms have a biotic potential much greater than that needed to replace dying organisms. Answer: TRUE

54. Population growth is determined by the combined effects of birthrate and death rate. Answer: TRUE

55. The factors that prevent unlimited population growth are known as limiting factors. Answer: TRUE

56. Using fertilizers is one way to increase the carrying capacity of an ecosystem. Answer: TRUE

57. The human population is gradually decreasing and will soon stabilize. Answer: FALSE

58. The sex ratio of a population is a way of stating the relative number of males and females. Answer: TRUE

59. K-strategists typically are small and short-lived organisms. Answer: FALSE

60. One of the major concerns about genetically modified organisms (GMOs) is the transfer of foreign genes to the wild relative of the crop plant. Answer: TRUE

61. Human populations are not subject to the same type of biological factors that influence other populations. Answer: FALSE

62. The ecological footprint of Japan is estimated to be 5 times larger than its locally available resources.

Answer: TRUE

63. Exponential growth results in a population increasing by a different percent each year. Answer: FALSE

64. All the different limiting factors that act upon a population are collectively known as environmental resistance. Answer: TRUE

65. The scientific study of human populations, their characteristics, how these characteristics effect growth and the consequences of that growth is known as demography. Answer: TRUE

66. Since 1925, China has had a series of family planning programs aimed at reducing the number of births in their country. Answer: FALSE

67. The rate of human population growth has led to political unrest in response to unequal p. access to resources.

Answer: TRUE