

NAME _____

(As before, correct answer + a sentence or two of explanation)

1. Cause of the Sahara Desert: _____
a) Global circulation b) Rain shadow
c) Distance from coast d) Cold, upwelling currents off west coasts
2. How do invasive species not disrupt native species? _____
a) Disrupt food chain b) Predation c) Resource competition
d) Symbiosis
3. Tropical regions are characterized by _____
a) High diversity, low abundance of species
b) Low abundance, low diversity of species
c) Low abundance, high diversity of species
d) Competitive exclusion
4. The Tropics are characterized by _____
a) Rising & cooling air b) Sinking and warming air
c) Air moving downslope on the lee side of a mountain range
d) Cold water offshore means more precipitation inland
5. Causes of our local dry conditions _____
a) Global circulation b) Rain shadow
c) Distance from coast d) Cold, upwelling currents off west coasts
6. The Climax vegetation assemblage in a region is the end result of many successional stages and shows no tendency to change further. T F
7. Pioneer species in primary succession are often (list all) _____
a) N fixers b) shade tolerant
c) sun tolerant d) secondary consumers

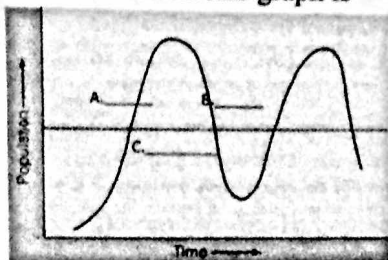
8. A combination of steep slopes, and hard rock uncovered after a burn leads to
a) rapid regrowth b) secondary succession
c) slow regrowth and disclimax d) deep soil
9. In exponential growth, the population (or value) grows by _____
a) addition of a constant per time
b) addition along a straight line
c) addition of a percent of the base per time
d) expansion outward
10. The effects of exponential growth can be _____
a) the same as always
b) surprisingly fast past the inflection point
c) Predictable d) just some dumb math scare tactics by doomsday prophets
11. Mal-nutrition is caused by _____
a) insufficient vitamins and minerals b) insufficient protein
c) insufficient calories d) insufficient protein and calories
12. Kwashiorkor ("displaced child") is caused by _____
a) insufficient fat b) insufficient protein
c) insufficient calories d) insufficient protein and calories
13. Biotic potential _____
a) how fast you grow up b) carrying capacity c) maximum rate of reproduction d) being all you can be...
14. War is an example of _____
a) inter (between) specific competition
b) intra (within) specific competition
c) carrying capacity d) symbiosis

15. War is _____
a) Density dependent

16. Floods are _____
b) Density independent

17. Plague is _____

18. Section B on this graph is



a) Carrying capacity b) Overshoot c) Die-off d) Roller coaster

19. Using 70/p with the population growth rate at 1%, how long does it take to double the population?

a) 70 years b) 140 years c) 35 years d) 17.5 years

20. If the doubling time of a bacterium is one minute, and a bottle filled with bacteria is full at 12:00, how long will it take to fill 3 more bottles?

a) 1 minute b) 2 minutes c) 3 minutes d) 4 minutes

21. # of species in ecosystem

a) Abundance b) Diversity c) Complexity d) Connectedness

22. # of species at each trophic level

a) Abundance b) Diversity c) Complexity d) Connectedness

23. The difference between primary and secondary succession is Presence or absence of soil T F
24. Rather than simply "Abiotic" or "Biotic", soil is a complex microcosm (miniature ecosystem) consisting of a multitude of organisms, decaying organic matter, and mineral material. T F
25. Upper treeline in Colorado is _____
a) 6000' b) 9500' c) 11,500' d) 12,500'
26. Some of the trees at the upper treeline show a growth form called _____
a) krummholz b) herbaceous c) upright d) deciduous
27. What is the incentive for manufacturers to produce less healthy foods? _____
a) as a public service to doctors b) better nutrition
c) more modern is better d) profit margin is higher on processed foods
28. Temperate crops, (these feed most of the world as most of the population lives in temperate zone-on the same 4.5% of land we always have) _____
a) cassava, sweet potato b) corn, rice, wheat
c) millet, sorghum d) oats, rye, potatoes
29. Anemia may be caused by too little _____
a) Vitamin B b) Vitamin D c) Vitamin C d) Iodine e) Iron
30. Goiter is caused by too little _____
a) Vitamin B b) Vitamin D c) Vitamin C d) Iodine e) Iron
31. Famines are generally density dependent, often are exacerbated by politics, and under some circumstances, can be density independent. T F

32. If a person ate only one type of grain as their only food, they would probably be deficient in:
a) carbohydrates b) calories
c) certain amino acids d) they would be just fine _____
33. The processes that occur in the "A" horizon consist of
a) weathering and leaching b) humus + mineral material
c) Accumulation of calcium carbonate d) accumulation of clays and Fe-oxides _____
34. The "B" horizon consists of
a) weathered parent b) humus + mineral material
c) ashly leached zone d) clays and Fe-oxides _____
35. Tropical soils are called
a) spodosols b) mollisols
c) histosols d) oxisols (laterites) _____
36. "Loam" is
a) brick-like when exposed to the sun
b) contains a zone of calcium carbonate
c) a mixture of sand, silt, clay and humus
d) mortar used to lay bricks _____
37. The Green Revolution (1968) utilized new high-yield crop varieties that were the result of...
a) selective breeding b) genetic modification
c) new fertilizers d) new pesticides _____
38. GMO crops were introduced around 1992, and are the result of...
a) selective breeding b) genetic modification
c) new fertilizers d) new pesticides _____

39. Bioaccumulation

- a) Many animals and plants in the same place
- b) Dead organic debris in a swamp
- c) Fat-soluble substances concentrating up the food chain
- d) Fat-soluble substances decreasing up the food chain

40. Broad spectrum effect

- a) Similar to "by-catch" in fishing (kills all)
- b) Photosynthesis in all wavelengths
- c) Big shovel
- d) Kills only specific pests

41. Xenobiotic means

- a) Greek life forms
- b) Greek for "foreign to life" or "Not found in nature"
- c) Readily biodegradable
- d) Inaccurate species name

42. "Exacerbate" means to

- a) make better
- b) make worse
- c) criticize
- d) stress over this exam

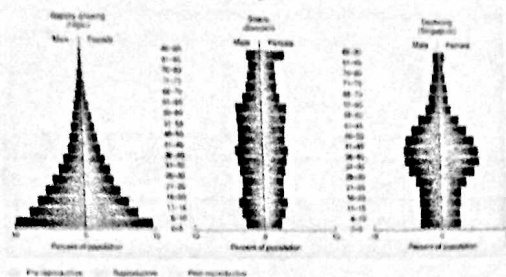
43. Pests typically are

- a) K-selected
- b) r-selected
- c) large mammals
- d) annoying friends

44. Although eggs and meat are "gold standard" proteins in terms of amino acid proportions, vegetable food sources can provide excellent, low fat, high fiber, proper protein content by "amino acid balancing" (beans + corn, rice + soy, etc.) T F

45. An hectare is _____ than an acre a) smaller b) larger c) same size but in metric

46. On the chart below, which Age-Structure graph is characteristic of a country with a rapidly expanding population and a short life-expectancy



- a) b) c) d) none of the above

47. In what phase of exponential growth was the human population in the year 2000?

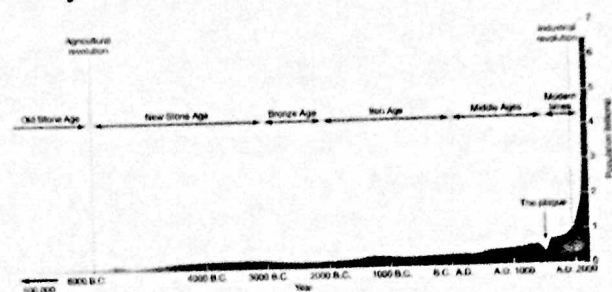


FIGURE 7.3 Human population levels through history. Since about A.D. 1800, our population curve has assumed a J-shape. Are we on the upward slope of a population overshoot? Will we be able to adjust our population growth to an S-curve? Or can we just continue the present trend indefinitely?

- a) exponential phase b) lag phase c) Inflection

48. The best amendments for garden soil are
a) motor oil b) old newspapers c) worms and humus d) dead wood

49. Most if not all world fisheries will have collapsed (been depleted) by the year 2050 if we keep fishing at the same rate

T F

50. Where is a region of world hunger and starvation?

- a) Sahel (sub-Saharan Africa) b) Canada c) Argentina d) Starbucks