1. The concept of sustainable development is to
   a) meet the needs for the indefinite future
   b) continue as always and assume that things will work out for the best
   c) to curtail all further development
   d) go back toward primitive living
   e) meet the needs for the immediate future

2. Which of the following are the three major gases present in the atmosphere:
   a) nitrogen, ozone, hydrogen
   b) sulfur, ozone, helium
   c) nitrogen, oxygen, carbon dioxide
   d) oxygen, ammonia, nitrogen
   e) none of the above

3. The proportion of the world’s human population living in developing countries is
   a) 50% and declining
   b) 80% and declining
   c) 20% and growing
   d) 50% and growing
   e) 80% and growing

4. The effect of climate on world food production
   a) is variable and therefore virtually unpredictable
   b) is expected to increase future yields
   c) consistently favors production in temperate regions
   d) has been abnormally variable but should become more consistent
   e) none of the above

5. Digesting manure anaerobically (without air) will yield mainly
   a) alcohol
   b) methane
   c) carbon dioxide
   d) ammonia
   e) oxygen

6. The gradual breakdown of rock into soil particles by physical and chemical processes is called
   a) leaching
7. A soil that allows very little leaching has good
   a) Infiltration
   b) nutrient-holding capacity
   c) aeration
   d) weathering
   e) all of the above

8. In many parts of the world, deserts are spreading largely because
   a) of overgrazing
   b) the climate is becoming hotter
   c) the climate is becoming dryer
   d) the climate is becoming hotter and dryer
   e) of unknown causes

9. Most land plants require substantial quantities of water to replace water lost through
   a) transpiration
   b) photosynthesis
   c) respiration
   d) percolation
   e) aeration

10. As water evaporates, minerals in solution
   a) go into the air along with water molecules
   b) remain behind
   c) are degraded to carbon dioxide and water
   d) are degraded to nothing
   e) none of the above

11. The ecosystem that originally covered most of the equatorial regions of the world is the
    a) grassland
    b) deciduous forest
    c) tundra
    d) tropical rainforest
    e) desert

12. The greatest precipitation occurs
    a) on the windward (upwind) side of mountain ranges
    b) on the leeward (downwind) side of mountain ranges
    c) over grasslands
    d) over river valleys
    e) over plains
13. A body of water which has no outlet other than evaporation is bound to be
   a) cold
   b) acidic
   c) salty
   d) fresh
   e) warm

14. Most of the water used in homes and industry is used
   a) for drinking by employees
   b) to wash, clean, rinse, and flush away undesired materials
   c) to water house plants
   d) for cooking
   e) for sporting

15. Which of the following is typically NOT performed by natural ecosystems?
   a) lowering of groundwater levels
   b) erosion control
   c) moderating climate
   d) absorption of pollutants
   e) being a genetic bank

16. Phytoplankton
   a) do not require mineral nutrients
   b) depend on mineral nutrients dissolved in the water
   c) get mineral nutrients from the bottom sediments
   d) produce the mineral nutrients they require
   e) none of the above

17. Sediments aggravate the problem of eutrophication because
   a) they absorb dissolved oxygen
   b) they contribute to reduced light levels
   c) they decrease water depths
   d) they add oxygen to the water
   e) all of the above

18. Which of the following is NOT a major source of sediments?
   a) plowed agricultural fields
   b) forested areas
   c) construction sites
   d) mining sites
   e) logging roads and clearcut forest areas

19. The pH of normal precipitation is
   a) slightly acidic
   b) slightly basic
20. Preliminary treatment of waste water includes
   a) coagulating nutrients
   b) decomposition of organic matter
   c) allowing grit to settle out
   d) removal of industrial wastes
   e) none of the above

21. When groundwater is contaminated from a leaking storage tank, remediation
   a) is impossible
   b) may be accomplished by injecting neutralizing chemicals
   c) may be accomplished by walling it off
   d) may be accomplished by pumping and treating the contaminated water
   e) has only had limited success at cleaning up groundwater contamination, and will shortly be discontinued

22. Which of the following statements is TRUE? Toxic wastes generated by households
   a) have been shown to be insignificant
   b) may be handled by occasional toxic waste pickups and public education
   c) should be banned
   d) should be monitored and controlled by the same law that control industry
   e) all of the above

23. "Gas wells" drilled into landfills collect the biogas which can be used to
   a) generate electricity
   b) produce plastics
   c) produce gasoline for automobile
   d) manufacture animal feed
   e) produce pesticide

24. Which of the following statements is NOT TRUE?
   a) Nature has ways of breaking down and/or recycling natural air pollutants
   b) Humans are producing pollutants far in excess of what is produced by nature
   c) None of the pollutants produced by humans can be broken down or recycled by nature
   d) Weather conditions may trap air pollutants and cause concentrations to climb
   e) Humans create situations where we are forced to live near sources of pollution

25. Which of the following are major sources of acid deposition?
   a) carbon monoxide and sulfur dioxide
   b) volatile organic compounds and nitrogen oxides
   c) lead and radon
   d) sulfur dioxide and nitrogen oxides
   e) carbon monoxide and radon
26. This step would probably have the greatest effect on reducing outdoor air pollution
   a) drastic reduction in automobile use
   b) drastic reduction in power plant emissions
   c) drastic reduction in use of lead-based paint
   d) drastic reduction in cigarette smoking
   e) drastic reduction in use of aerosol cans

27. Acid precipitation refers
   a) to any precipitation which is more acidic than neutral
   b) to any precipitation which is more acidic than normal
   c) only to precipitation which is strongly acidic
   d) to a new kind of irrigation
   e) to a precipitation which causes particularly severe erosion

28. A major factor responsible for acid rain is
   a) hydrocarbons from cars
   b) smoke
   c) carbon dioxide from all fuel burning
   d) carbon monoxide from cars
   e) sulfur dioxide from burning coal

29. The greenhouse effect refers to
   a) the principle on which a new solar heating device is based
   b) the removal of air pollutants by passing the air(5,15),(994,995) through greenhouses
   c) increased albedo due to greenhouses
   d) the growth of crops in greenhouses using hydroponics
   e) warming of the Earth’s atmosphere

30. Greenhouse gases
   a) are transparent to heat but absorb sunlight
   b) are transparent to sunlight but absorb heat
   c) are transparent to heat and sunlight
   d) do not include SF₆
   e) cause the depletion of the stratospheric ozone

31. The greatest benefit of pollution control is likely to be achieved in
   a) reducing future risks
   b) reducing current health care cost
   c) reducing current agriculture losses
   d) reducing current forest damage
   e) nothing

32. The world’s worst nuclear power plant disaster to date occurred at
   a) Three-Mile Island, USA
   b) Grenoble, France
33. The region of the world where more living species live than any other place is
   a) deciduous forest
   b) temperate rain forest
   c) tropical rain forest
   d) grassland
   e) coral reefs

34. Most of the endangered species can be saved from extinction
   a) only by preserving and protecting the ecosystems in which they live
   b) by breeding them in captivity
   c) by giving them to people to keep as pets
   d) by hybridizing them with other more vigorous species
   e) by giving them more vigor through genetic engineering

35. Indirect sources of solar energy do NOT include
   a) wind
   b) firewood
   c) nuclear fission
   d) water power
   e) alcohol

36. A passive solar heating system would NOT have
   a) pumps or blowers to circulate heated air or water
   b) a flat plate collector
   c) large windows to let in sunlight
   d) drapes to cover windows at night
   e) a means of holding/storing heat

37. Which of the following is NOT true about wetlands?
   a) their fertile soils usually make good agricultural areas when drained
   b) they provide services whose economic value has been computed to be very high
   c) they retain sediments
   d) they promote downstream flooding
   e) they accumulate and transform nutrients and toxins

38. Most municipal solid waste is from
   a) private homes and apartments
   b) industries
   c) farms
   d) sewage treatment plants
   e) none of the above
39. Which of the following components of refuse CANNOT be composted
   a) paper
   b) plastic
   c) food wastes
   d) yard wastes
   e) cardboard

40. Leachate is
   a) water that passes through the sewage treatment plant
   b) water that percolates through a landfill and may pick up pollutants from that landfill
   c) water that sits in drainage ditches at the side of the road
   d) water that is sprayed in incinerators to reduce the temperature
   e) none of the above