

**Environmental Health Sciences
Self-Study Course SS3010**

Lesson 1: *Control of Communicable and Certain Noninfectious Diseases*

Part I: Multiple Choice

1. A factor or agent which increases the risk of cancer is known as a
 - a. teratogen
 - b. mutagen
 - c. carcinogen
 - d. fomite.

2. The amelioration of a disease to reduce disability or dependence resulting from it is termed
 - a. first degree prevention
 - b. second degree prevention
 - c. tertiary prevention
 - d. none of the above.

3. The gains in life expectancy between 1900 (48 years) and 1974 (72 years) have occurred mostly in the early years and are due to
 - a. sanitation
 - b. nutrition
 - c. chemotherapy
 - d. all of the above.

4. Between 27 B.C. and 395 A.D., the average life expectancy was _____.
 - a. 73 years
 - b. 36 years
 - c. 45 years
 - d. 24 years.

5. The four major causes of death among all age groups of Americans include all of the following **except**
 - a. homicide
 - b. accidents
 - c. malignant neoplasms
 - d. heart disease.

6. There is a scientific consensus that further increases in life expectancy are dependent on the extent to which
 - a. cancer can be controlled
 - b. personal lifestyles can be changed
 - c. pollution can be controlled
 - d. b and c above.

7. As of 1975, the diseases which caused 2/3's of the deaths in the United States included all but which of the following?
 - a. cerebrovascular diseases
 - b. influenza
 - c. cancer
 - d. heart disease.

8. The goal of environmental health programs should be
 - a. the prevention of disease
 - b. the enjoyment of living
 - c. the preservation of comfort
 - d. all of the above.

9. The basic principles of disease control include all of the following **except**
 - a. use of antibiotics
 - b. control of disease source
 - c. mode of transmission
 - d. susceptibility.

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10. The prevention of respiratory diseases in "at risk" individuals is to
- a. protect people from the source
 - b. eliminate routes of transmission
 - c. reduce presence of susceptible individuals
 - d. all of the above.
11. A water or foodborne disease outbreak with a short incubation period is likely because of
- a. chemical poisoning
 - b. schistosomiasis
 - c. salmonellosis
 - d. shigella.
12. A major process for the prevention of respiratory disease of susceptible persons is
- a. isolation
 - b. hospitalization
 - c. immunization
 - d. education.
13. In recent years, the largest number of rabies cases were associated with
- a. skunks
 - b. bats
 - c. dogs
 - d. raccoons.
14. Asbestosis is caused by fine silicate fibers retained in the
- ~~a. kidneys~~
 - b. lungs
 - c. colon
 - d. abdomen.

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15. An illness due to a specific infectious agent or its toxic product which is transmitted from a reservoir to a susceptible host either directly or indirectly is called
- a. an infectious disease
 - b. a communicable disease
 - c. a genetic disease
 - d. a noncommunicable disease.
16. The primary health problems of developing countries are
- a. diphtheria and pertussis
 - b. heart disease
 - c. cancer and diabetes
 - d. communicable disease and malnutrition.
17. The term "endemic" means
- a. sporadic occurrence of an illness
 - b. constant presence of an illness
 - c. all illnesses present at any one time
 - d. an unusually large number of persons with the same illness.
18. The interval between exposure to an infectious agent and the appearance of the first symptom is called the
- a. lag time
 - b. susceptible period
 - c. incubation period
 - d. primary period.
19. Schistosomiasis is
- a. a water contact disease
 - b. a foodborne disease
 - c. a milkborne disease
 - d. an airborne disease.

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20. A disease transmitted by birds and bird droppings is
- ~~a. dengue fever~~
 - b. psittacosis
 - c. tularemia
 - d. murine typhus.
21. An infected organism which does not exhibit symptoms during the spread of an illness is called a
- a. reservoir
 - b. parasite
 - c. host
 - d. carrier.
22. The killing of an infectious agent outside the body by chemical or physical means is termed
- a. detoxification
 - b. deodorization
 - c. destabilization
 - d. disinfection.
23. Rocky Mountain spotted fever is spread by
- a. flies
 - b. spiders
 - c. cockroaches
 - d. ticks. *dog ticks - rna*
24. Mycotoxins are poisonous chemicals produced by
- a. bacteria
 - b. vertebrates
 - c. viruses
 - d. fungi.

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25. The study of the occurrence, frequency, and distribution of disease is
- a. entomology
 - b. biology
 - c. endocrinology
 - d. epidemiology.

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Part II: True-False

(Mark answer sheet under column "A" if the statement is true, or under column "B" if the statement is partially or totally false.)

- T 1. Disease is considered the antithesis of health, defined as "a state of physical, mental, and social well-being and ability to function, and not merely the absence of illness or infirmity."
- F 2. The prevention of deaths from a particular disease increases the overall life expectancy in direct proportion to its decreased mortality.
- F 3. Life expectancy is a measure of health progress, ^{Not this part} (morbidity levels, and the quality of life.)
- T 4. Observations and cost-effective analyses have shown that good housing and sanitation are far more effective measures for the control of cholera, typhoid, and similar diseases than is immunization.
- F 5. Soil moisture of about 30% to 45% of saturation is the best for survival of pathogens. (10-20%)
- T 6. Coliform, on soil surfaces, may survive up to 38 days.
- F 7. Ascaris ova may survive up to 7 hours in moist, warm soil. - 18 days to ~~weeks~~ ^{7 years}
- T 8. It is believed that the ingestion of one virus particle can cause infection in humans.
- F 9. A typical chronic toxicology test on a compound can be done for less than 3,000 1985 dollars and will take about 1 year of time to complete. \$250,000 - 300,000 / 8-3 yrs
- T 10. Urine is usually sterile, except for urinary schistosomiasis, typhoid, and leptospirosis carriers.
- F 11. Onchocerciasis is a rare illness found in some third world countries. "River blindness" 2nd leading cause of infectious blindness
- T 12. Food poisoning from *Staphylococcus aureus* can be prevented by thoroughly cooking foods that have been properly handled and then through appropriate time temperature control of the finished product.
- F 13. Toxins that attack nerves are referred to as enterotoxin. neurotoxin
- T 14. It is estimated only 38% of water and foodborne diseases are reported.

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- T 15. Some of the prime sources of *Giardia lamblia* cysts are humans, beavers, muskrats, and domestic animals.
- F 16. The disease caused by *Legionella pneumophila* was found to originate in the tanks or water closets in older hotels. - water supply i.e. fountains, hot water tanks
- F 17. Harsh miasma is another name for the disease known as Legionella.
 Theory of "bad air" causing disease - cholera, diphtheria, black death
- T 18. House mice may carry the disease lymphocytic choriomeningitis.
- T 19. Tularemia is often transmitted to humans by dogs. "Rabbit fever"
- F 20. Rats are one of the seven animals most likely to carry rabies.
 raccoons, skunks, foxes, coyotes, wolves, groundhogs, beavers
 Small rodents rarely are infected w/ rabies EXC. woodchuck
- F 21. A vaccinated dog or cat bitten by or exposed to a rabid animal should be confined for 4 months or destroyed. Unvaccinated = 6 mos or destroyed
- T 22. The most effective means of control of bats is to "build them out."
- T 23. Any person bitten by a bat should receive antirabies therapy unless the bat is caught and found to be negative for the rabies virus.
- F 24. The cancer rate is roughly 72% higher for inner-city people than the level for suburbanites.
 ↳ ~ 50%
- T 25. An analysis by Dever indicated that environmental factors were considered to be the cause of 49% of all deaths due to accidents, 20% of the influenza and pneumonia deaths, 41% of the homicides, and 15% of the deaths due to birth injuries and other diseases peculiar to early infancy.