Chapter 2
Epidemiology

Multiple Choice Questions

1. The primary focus of the epidemiologist is on:
   a. Catastrophic disease outbreaks.
   b. Societal demographics.
   c. Health and wellness of children.
   d. Individual's diseases.
   e. Health problems of social aggregates.

   Answer: E   Page: 23

2. A scientist who studies the origin and distribution of all types of diseases is best described as a(n):
   a. Biochemist.
   b. Social worker.
   c. Epidemiologist.
   d. Demographer.
   e. Sociologist.

   Answer: C   Page: 23

3. In epidemiology, a "case" refers to:
   a. An investigation into an outbreak of disease or illness.
   b. The classification of a disorder, illness, or injury.
   c. A collection of a single type of disorder, illness, or injury.
   d. A single episode of a disorder, illness, or injury involving an individual.
   e. There is no such epidemiological term.

   Answer: D   Page: 24

4. A researcher is interested in reporting how many people in a community were diagnosed with HIV during the past month. He/she would measure the:
   a. Incidence.
   b. Prevalence.
   c. Crude rate.
   d. Cases.
   e. Age-specific rate.

   Answer: A   Page: 24

5. Which of the following is TRUE about incidence and prevalence?
   a. Prevalence is used to analyze the rate at which new cases occur.
   b. Incidence and prevalence are interchangeable terms.

c. Incidence is reported in raw numbers while prevalence is expressed as a ratio.
d. The incidence for a given disease can be low at the same time that its prevalence is high.
e. None of the above

Answer: D   Page: 24

6. A ratio, such as the crude mortality rate, is expressed as:
    a. Total number of cases divided by prevalence.
    b. Total number of cases divided by incidence.
    c. Total number of cases divided by total population.
    d. Total number of cases times total population.
    e. Total number of cases times incidence.

Answer: C   Page: 24-25

7. _____ has special significance for a society because it is traditionally used as an approximate indicator of a society's standard of living and quality of health care delivery.
    a. Prevalence of chronic diseases.
    b. Life expectancy.
    c. Infant mortality rate.
    d. Crude birth rate.
    e. Age adjusted fertility rate.

Answer: C   Page: 25

8. What is NOT a factor in the increasing emergence of epidemics?
    a. Increase in international transportation channels.
    b. Migration from rural areas into urban cities.
    c. Increase in public sanitation.
    d. All of the above.
    e. None of the above.

Answer: C   Page: 26

9. Whose investigations into cholera outbreaks established the foundation of modern epidemiology?
    a. Louis Pasteur.
    b. John Snow.
    c. Karl Marx.
    d. Ralph Paffenbarger.
    e. All these men helped lay the foundation of epidemiology.

Answer: B   Page: 27

10. Germ theory provided a framework for understanding the causal agents of disease. What are the five agents recognized today?
    a. Biological, social, psychological, toxic, and environmental.
    b. Biological, physical, social, mental, and metaphysical.
    c. Biological, physical, social, mental, and psychological.
    d. Biological, nutritional, chemical, mental, and psychological.
    e. Biological, nutritional, chemical, physical, and social.

    Answer: E   Page: 28

11. The science of epidemiology has passed through three eras and is entering a fourth. In what order did it pass through the first three eras?
    a. Sanitary, Infectious, Chronic.
    b. Sanitary, Chronic, Infectious.
    c. Chronic, Sanitary, Infectious.
    d. Chronic, Infectious, Sanitary.
    e. Infectious, Sanitary, Chronic.

    Answer: A   Page: 28

12. As a nation shifts from primarily rural-agricultural to urban-industrial, what changes are seen in the health profile of the nation?
    a. Leading causes of death change from mostly chronic diseases to infectious diseases.
    b. Leading causes of death change from mostly infectious diseases to chronic diseases.
    c. Infectious diseases are eliminated entirely
    d. Both infectious and chronic diseases are reduced to a minimum.
    e. There is no difference

    Answer: B   Page: 29

13. What is the leading cause of death in the United States, accounting for more than one-third of all deaths?
    a. Diabetes.
    b. HIV/AIDS.
    c. Stroke.
    d. Heart disease.
    e. Cancer.

    Answer: D   Page: 30

14. The _____ study was important for showing that arteriosclerosis does not strike people at random as they age, but that highly susceptible individuals can be identified in advance.
    a. CVD1960.

b. Framingham.
c. Tuskegee.
d. Whitehall.
e. Engels.

Answer: B   Page: 30

15. What do studies on diet, exercise, and obesity suggest with respect to heart disease?
    a. Diet and physical activity have little effect on an individual's likelihood of developing heart disease.
    b. Changing one's eating habits toward a diet low in saturated fat can reduce the risk of developing heart disease.
    c. Obesity is the result of individual choices and relates little to the development of heart disease.
    d. Only lengthy, vigorous physical activity has been shown to provide some protection against heart disease.
    e. None of the above.

Answer: B   Page: 31-35

16. At the end of 2007, the majority of AIDS cases in the U.S. were found in:
    a. Homosexual and bisexual men.
    b. Homosexual and bisexual women.
    c. Intravenous drug users.
    d. Blood transfusion patients.
    e. Children of a parent with AIDS.

Answer: A   Page: 38

17. The lowest AIDS mortality rates for American males are found in:
    a. Native Americans.
    b. Non-Hispanic whites.
    c. Hispanics.
    d. Non-Hispanic African Americans.
    e. Asians.

Answer: E   Page: 39

18. Since 2000, the number of AIDS cases has sharply increased in what region of the U.S.?
    a. Northwest.
    b. West.
    c. Midwest.
    d. Northeast.
    e. South.

Answer: E   Page: 40

13

19. AIDS is transmitted in Africa and some parts of Asia primarily by:
    a. Heterosexual contact.
    b. Homosexual contact.
    c. Intravenous drug use.
    d. Blood transfusions.
    e. Infected mother to child.

    Answer: A   Page: 40-41

20. Which of the following plays a particularly important role in the transmission of AIDS in Sub-Saharan Africa?
    a. Government.
    b. Health delivery system.
    c. Migrant labor force.
    d. Homosexuals.
    e. Drug users.

    Answer: C   Page: 41

21. AIDS now affects _____ in Africa more than _____.
    a. Whites, natives.
    b. Children, adults.
    c. Homosexuals, heterosexuals.
    d. Men, women.
    e. Women, men.

    Answer: E   Page: 41

22. _____ appears to be a major channel for AIDS transmission in India.
    a. Marijuana use.
    b. Mother to child transmission.
    c. Prostitution.
    d. Improper sanitation.
    e. Overcrowding.

    Answer: C   Page: 42

23. The HIV outbreak in China initially occurred among _____ in Yunnan Province.
    a. Bisexuals.
    b. Homosexuals.
    c. Intravenous drug users.
    d. Blood transfusions recipients.
    e. Infected mothers to children.

Answer: C   Page: 42

24. People who become infected with HIV may be subjected to discrimination, which can isolate them socially. This social outcome is:
    a. Stigma.
    b. Stagflation.
    c. Disintegration.
    d. Disentanglement.
    e. All of the above.

    Answer: A   Page: 42

25. _____ activity by Latin American men is believed to be important in the infection of a large proportion of females.
    a. Bisexual.
    b. Heterosexual.
    c. Intravenous drug use.
    d. Homosexual.
    e. Illegal.

    Answer: A   Page: 42

26. Which of the following demonstrates the sociological implications of the HIV/AIDS epidemic?
    a. Its influence on modifying social norms, values, and lifestyles.
    b. How certain social behaviors lead to the transmission of the disease and result in a pandemic.
    c. The social rejection of AIDS patients.
    d. Moral and religious debates over the meaning of the disease and treatment options.
    e. All of the above.

    Answer: E   Page: 43

27. Which term describes an individual's most important position in society and typically comes from one's occupation?
    a. Default status.
    b. Ordinary status.
    c. Master status.
    d. Primary status.
    e. Main status.

    Answer: C   Page: 43

28. Since AIDS results from a private act that has extreme social consequences, serious moral and legal questions also arise about the rights of _____ versus the welfare of _____.
    a. Individuals, government.
    b. Individuals, society.
    c. Hospitals, individuals.
    d. Hospitals, society.
    e. Government, society.

    Answer: B   Page: 43

29. The current public policy approach to dealing with AIDS is:
    a. Through banning high-risk behaviors.
    b. Through mandatory universal testing.
    c. Through quarantine of infected individuals.
    d. Through safe-sex education.
    e. None of the above.

    Answer: D   Page: 43

30. Which of the following best describes influenza pandemics?
    a. They occur frequently but the threat to worldwide health is minimal.
    b. They have been mostly eliminated due to the development of vaccines such as Tamiflu.
    c. They are easily contained to the region of outbreak.
    d. They are unpredictable and occur at irregular intervals.
    e. None of the above.

    Answer: D   Page: 44

True False Questions

1. Many sociologists working in the field of medicine are epidemiologists.

    Answer: TRUE   Page: 23

2. Present-day epidemiologists primarily study epidemic diseases and give little attention to other diseases such as chronic ailments or unhealthy behaviors.

    Answer: FALSE   Page: 23

3. Prevalence rates, when expressed as point prevalence, period prevalence, or lifetime prevalence, vary based on the disease being measured.

    Answer: FALSE   Page: 24

4. The simplest ratio computed by the epidemiologist is called the crude rate.

> Answer: TRUE   Page: 24

5. Crude death and birth rates are too gross a measure to be meaningful for most sociological purposes

> Answer: TRUE   Page: 25

6. The living conditions of early nomadic humans, with close proximity to others and exploration of new environments, was favorable to widespread and frequent epidemics.

> Answer: FALSE   Page: 26

7. The bubonic plague was ended in 1750 with the development of penicillin.

> Answer: FALSE   Page: 27

8. What a person does, who a person is, and where a person lives can specify what health hazards are most likely to exist in that individual's life.

> Answer: TRUE   Page: 28

9. The social environment, referring not only to living conditions but also norms and values, can cause sickness.

> Answer: TRUE   Page: 28

10. Developing nations are typically characterized by a high birth rate and a high death rate, with a relatively young population.

> Answer: TRUE   Page: 29

11. About twice as many males die from heart disease as females, and men are more likely than women to have a worse prognosis if they survive the first serious heart attack.

> Answer: FALSE   Page: 30

12. Smoking is the leading cause of sudden cardiac death in the United States and quitting smoking nearly eliminates this risk after a year or two.

> Answer: TRUE   Page: 31

13. Pandemics are regional or local outbreaks of a disease and rarely happen.

> Answer: FALSE   Page: 36

14. HIV/AIDS first appeared in intravenous drug users in New York and San Francisco.

       Answer: FALSE   Page: 37

15. AIDS potentially entered the U.S. through Haiti.

       Answer: TRUE   Page: 38

16. Much of the fear about AIDS arises from the fact that many people who carry the virus are not aware of it.

       Answer: TRUE   Page: 38

17. People most at risk for developing AIDS are those who have had multiple sex partners and know little about their partners' past sexual behavior.

       Answer: TRUE   Page: 38

18. In states like Mississippi and North Carolina, more black women than white men have contracted HIV.

       Answer: TRUE   Page: 40

19. Estimating the number of individual flu cases in an outbreak is an easy task, since almost everyone who becomes sick with the flu requires medical care.

       Answer: FALSE   Page: 44

Essay Questions

1. Define *incidence* and *prevalence*. Explain the relationship between the two, and identify which issues with each pertain when examining chronic and acute illnesses.

2. Recognition that germs were causal agents of disease served as a precursor to scientific findings that people come into contact with a variety of causal agents. Define all five agents, and provide examples of each type.

3. Describe the <u>four</u> eras of epidemiology.

4. Modification in what four lifestyle areas significantly reduce the risk of heart disease? Discuss how and why these modifications affect the risk of developing heart disease.

5. Developing and developed nations have a different pattern of disease and illness. List the most prevalent diseases in both nation types, and discuss why these differences exist.