

Microbiology / Active Lecture Questions
Chapter 14 / Principles of Disease & Epidemiology

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2 The emergence of new infectious diseases is probably due to all of the following except

- a. the need of bacteria to cause disease.
- b. the ability of humans to travel by air.
- c. changing environments (e.g., flood, drought, pollution).
- d. a pathogen crossing the species barrier.
- e. the increasing human population.

3 All members of a group of ornithologists studying barn owls in the wild have had salmonellosis (*Salmonella gastroenteritis*). One birder is experiencing her third infection. What is the most likely source of their infections?

- a. The ornithologists are eating the same food.
- b. They are contaminating their hands while handling the owls and nests.
- c. One of the workers is a *Salmonella* carrier.
- d. Their drinking water is contaminated.

4 Which of the following statements is not true?

- a. *E. coli* never causes disease.
- b. *E. coli* provides vitamin K for its host.
- c. *E. coli* often exists in a mutualistic relationship with humans.
- d. *E. coli* gets nutrients from intestinal contents.

5 Which of the following is not one of Koch's postulates?

- a. The same pathogen must be present in every case of the disease.
- b. The pathogen must be isolated and grown in pure culture from the diseased host.
- c. The pathogen from pure culture must cause the disease when inoculated into a healthy, susceptible laboratory animal.
- d. The disease must be transmitted from a diseased animal to a healthy, susceptible animal by some form of contact.
- e. The pathogen must be isolated in pure culture from an experimentally infected lab animal.

6 Which one of the following diseases is not correctly matched to its reservoir?

- a. influenza—human
- b. rabies—animal
- c. botulism—nonliving
- d. anthrax—nonliving
- e. toxoplasmosis—cats

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7 [for slides 8, 9] On September 6, a 6-year-old boy experienced fever, chills, and vomiting. On September 7, he was hospitalized with diarrhea and swollen lymph nodes under both arms. On September 3, the boy had been scratched and bitten by a cat. The cat was found dead on September 5, and *Yersinia pestis* was isolated from the cat. Chloramphenicol was administered to the boy from September 7, when *Y. pestis* was isolated from him. On September 17, the boy's temperature returned to normal; and on September 22, he was released from the hospital.

8 Identify the incubation period for this case of bubonic plague.

- a. September 3–5.
- b. September 3–6.
- c. September 6–7.
- d. September 6–17.

9 Identify the prodromal period for this disease.

- a. September 3–5.
- b. September 3–6.
- c. September 6–7.
- d. September 6–17.

10 [for slides 11-13] A Maryland woman was hospitalized with dehydration; *Vibrio cholerae* and *Plesiomonas shigelloides* were isolated from the patient. She had neither traveled outside the United States nor eaten raw shellfish during the preceding month. She had attended a party 2 days before her hospitalization. Two other people at the party had acute diarrheal illness and elevated levels of serum antibodies against *Vibrio*. Everyone at the party ate crabs and rice pudding with coconut milk. Crabs left over from this party were served at a second party. One of the 20 people at the second party had onset of mild diarrhea; specimens from 14 of these people were negative for vibriocidal antibodies.

11 This is an example of

- a. vehicle transmission.
- b. airborne transmission.
- c. transmission by fomites.
- d. direct contact transmission.
- e. nosocomial transmission.

12 The etiologic agent of the disease is

- a. *Plesiomonas shigelloides*.
- b. crabs.
- c. *Vibrio cholerae*.
- d. coconut milk.
- e. rice pudding.

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13 The source of the disease was

- a. Plesiomonas shigelloides.
- b. crabs.
- c. Vibrio cholerae.
- d. coconut milk.
- e. rice pudding.

14 Transient microbiota differ from normal microbiota in that transient microbiota

- a. Cause diseases
- b. Are found in a certain location on the host
- c. Are acquired by direct contact
- d. Are present for a relatively short time

15 The fact that normal microbiota can benefit the host by preventing the overgrowth of harmful microorganisms is called

- a. Microbial antagonism
- b. Symbiosis
- c. Mutualism
- d. Commensalism

16 If the normal microbiota are eliminated (by antibiotics, for example), it can result in

- a. Fewer diseases
- b. Normal microbiota returning immediately
- c. Increased susceptibility to disease
- d. No bacterial growth

17 Diseases caused by microorganisms that normally grow outside the human body and are not transmitted from one host to another are:

- a. Communicable
- b. Contagious
- c. Nosocomial
- d. Noncommunicable

18 Objective changes the physician can observe and measure are called

- a. Symptoms
- b. Characteristics
- c. A syndrome
- d. Signs

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19 A disease acquired by many people in a given area in a short period of time is called

- a. Pandemic
- b. Epidemic
- c. Sporadic
- d. Endemic

20 Tuberculosis may occur in individuals who have influenza.

Which of the following statements is FALSE?

- a. Tuberculosis is a predisposing factor
- b. Tuberculosis is an infectious disease
- c. Tuberculosis is a secondary infection
- d. Tuberculosis is a chronic disease

21 The stage of disease that is characterized by early and mild symptoms is called the

- a. Period of illness
- b. Incubation period
- c. Prodromal period
- d. Period of convalescence

22 The spread of disease agents via contaminated water is an example of

- a. Mechanical transmission
- b. Direct contact transmission
- c. Vehicle transmission
- d. Biological transmission

23 A nosocomial infection

- a. Is typically present before a hospital stay
- b. Results from aseptic technique
- c. Is acquired during the course of hospitalization
- d. Is only a result of surgery

24 What is the most common type of nosocomial infection?

- a. Lower respiratory infections
- b. Postoperative infections
- c. Bacteremia
- d. Urinary tract infections

25 Which of the following measures is NOT used to prevent nosocomial infections

- a. Use of aseptic technique
- b. Frequent handwashing
- c. Increased use of immunosuppressive drugs
- d. Education of staff

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26 The science that studies when and where diseases occur and how they are transmitted in populations is called

- a. Etiology
- b. Epidemiology
- c. Communicable disease
- d. Morbidity and mortality

27 The Morbidity and Mortality Weekly Report is published by the

- a. CDC
- b. NIH
- c. FDA
- d. WHO

28 Who made a map showing that people infected with cholera drank from the Broad Street pump?

- a. Robert Koch
- b. John Snow
- c. Florence Nightingale
- d. Ignaz Semmelweis

29 The major significance of Koch's work was that?

- a. Microorganisms are present in diseased animals
- b. Microorganisms cause disease
- c. Microorganisms can be cultured
- d. Diseases can be transmitted from one animal to another.

30 Which of the following is mismatched?

- a. Epidemic- disease present year round
- b. Incidence- number of cases of a disease
- c. Sporadic- disease appears occasionally
- d. Pandemic- disease affects a large number of people in the world in a short time
- e. Endemic- disease is constantly around