



6. Provide the *epidemiologic term* used to refer to definitions: [2]

Term	Definitions
	disease occurrence in <i>excess</i> of normal expectancy
	disease occurrence at a <i>constant or predictable</i> rate
	related to disease or disability
	related to death

7. (M/C) In what year did epidemiology become an established (separate) field of study?

- (a) 1750                      (b) 1800                      (c) 1850                      (d) 1900

8. (M/C) What is the most common cause of death in the United States today?

- (a) heart disease              (b) cancer                      (c) pneumonia/influenza              (d) HIV/AIDS

9. (M/C) What was the most common cause of death 100 years ago?

- (a) heart disease              (b) cancer                      (c) pneumonia/influenza              (d) HIV/AIDS

10. (M/C) Which type of well-being is NOT part of the WHO definition of health?

- (a) physical                      (b) mental                      (c) social well-being  
 (d) spiritual well-being              (e) all of the above are part of the WHO definition of health

11. (M/C) Which is the correct rank order of life expectancy in the U.S.?

- (a) white female, white male, af am female, af am male  
 (b) white male, white female, af am female, af am male  
 (c) white female, af am female, af am male, white male  
 (d) white female, af am female, white male, af am male

12. True or false? Cancer rates are on the increase in the United States.

- (a) true                              (b) false

13. Match the name of the pioneering epidemiologist with their brief bio. [2]

Epidemiologist: Farr, Graunt, Louis, Snow

Name	Description
	18 <sup>th</sup> century Frenchman who emphasized the “medicine of observation”
	17 <sup>th</sup> century Englishman who was first to use population-based data to study disease
	19th century Victorian physician who innovated and tested theories about contagion
	first Registrar General of a national vital statistics branch; innovated many demographic and epidemiologic methods

**CHAPTER 2**

14. True or false? Causal factors rarely (if ever) act alone.

- (a) True (b) False

15. (M/C) Is pap screening (checking for early signs of cervical cancer before clinical symptoms arise) a form of primary, secondary, or tertiary prevention?

- (a) primary (b) secondary (c) tertiary

16. (M/C) Is vaccination a form of primary, secondary, or tertiary prevention?

- (a) primary (b) secondary (c) tertiary

17. (M/C) Is the health education to prevent HIV infection a form of primary, secondary, or tertiary prevention?

- (a) primary (b) secondary (c) tertiary

18. What event marks the beginning of the clinical stage of disease?

19. What is the goal of primary prevention?

20. Describe the *incubation period* of a disease? (Identify beginning and end of period, and what occurs during this interval.)

[2]

21. Match the period with its description. Terms: induction period, latent period [1]

Period	Description
	time between causal action and initiation of disease
	time between initiation of disease and disease detection

22. Match the term with its description. Terms: subclinical stage, iceberg phenomenon, spectrum of disease [1½]

Term	Description
	when a disease displays a <i>broad range of manifestations</i> and severities
	when a large percentage of problem is <i>undetected</i> in population
	when signs and symptoms are not yet apparent in an <i>individual</i>





39. Provide a reason to study the infectious disease process.

40. (M/C) What type of transmission was operative during the infamous Broad Street pump outbreak (Chap 1)?

- (a) vector borne      (b) cyclopropagative      (c) common vehicle spread      (d) serial transfer

41. What does an epidemiologist mean when he or she refers to a *portal* of infection?

42. Read the article attached to this exam and then provide the following information:

- (a) What is the *reservoir* of this agent?
- (b) What *vector* transmits this agent?
- (c) Why is it important to understand the shape of the agent?
- (d) List a *host factor* that influences pathogenicity of the agent.
- (e) Identify a method of environmental control of the disease.
- (f) Identify a surveillance method epidemiologists use to keep tabs on the agent

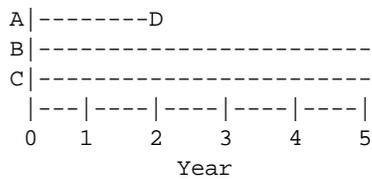


45. Using the demographic data from an open population in the table below, calculate the vital statistics requested.

Total midyear population	25,000
Population size, 65 years of age or older	750
Number of live births	300
Total deaths (all cause)	250
Deaths in infants under 1 year of age	3
Deaths in persons 65 and over	125

- (a) Crude birth rate per 1,000
- (b) Crude death rate per 1,000.
- (c) Infant mortality rate per 1000.
- (d) Age-specific death rate in those over 65 years of age per 1000.

46. In the schematic below, dashed lines (--) represent healthy living and D indicates disease onset in persons A, B, and C.



- (a) What is the risk of disease? [2]
- (b) What is the rate of disease? [2]
- (c) (M/C) What the dimensionality of the risk?
  - (a) dimensionless (pure number)
  - (b) inverse-time (“person-time”)
  - (c) other
- (d) (M/C) What the dimensionality of the rate?
  - (a) dimensionless (pure number)
  - (b) inverse-time (“person-time”)
  - (c) other

47. (M/C) Prevalence is the likelihood an individual selected at random will  
 (a) currently have the disease (b) develop the disease (c) recover from the disease (d) die from the disease
48. True or false? Incidence proportions can NOT be calculated in open populations.  
 (a) true (b) false
49. What happens to the prevalence of a disease in a population when the average duration of the disease increases?  
 (a) it increases (b) it decreases (c) it stays the same
50. A cohort is a type of:  
 (a) open population (b) dynamic population (c) closed population (d) none of the above
51. Express the rate  $0.0222 \text{ year}^{-1}$  with a 1000 person-year multiplier.  
 (a) 2.22 per 1000 p-yrs (b) 22.2 per 1000 p-yrs (c) 222 per 1000 p-yrs (d) none of above
52. What can happen to the size of an *open population* over time?  
 (a) may shrink (b) may grow (c) may remain constant (d) all of the above
53. Match the term with its description. Terms: incidence proportion, incidence rate, prevalence count, incidence count. [2]

	inverse of "waiting time" to disease
	average risk of disease
	number of cases (old and new)
	number of disease onsets

54. What does a demographer mean when he or she says the population is *stationary*? [2]
55. When does the numerical value of a one-year risk approximately equal the rate of disease? [2]