

## Chapter 01: Introduction to Pathophysiology

### VanMeter and Hubert: Gould's Pathophysiology for the Health Professions, 7th Edition

#### MULTIPLE CHOICE

1. Which of the following would be the most likely cause of an iatrogenic disease?
  - a. An inherited disorder
  - b. A combination of specific etiological factors
  - c. An unwanted effect of a prescribed drug
  - d. Prolonged exposure to toxic chemicals in the environment

ANS: C

2. The manifestations of a disease are best defined as the
  - a. subjective feelings of discomfort during a chronic illness.
  - b. signs and symptoms of a disease.
  - c. factors that precipitate an acute episode of a chronic illness.
  - d. early indicators of the prodromal stage of infection.

ANS: B

3. The best definition of the term *prognosis* is the
  - a. precipitating factors causing an acute episode.
  - b. number of remissions to be expected during the course of a chronic illness.
  - c. predicted outcome or likelihood of recovery from a specific disease.
  - d. exacerbations occurring during chronic illness.

ANS: C

4. Which of the following is considered a systemic sign of disease?
  - a. Swelling of the knee
  - b. Fever
  - c. Pain in the neck
  - d. Red rash on the face

ANS: B

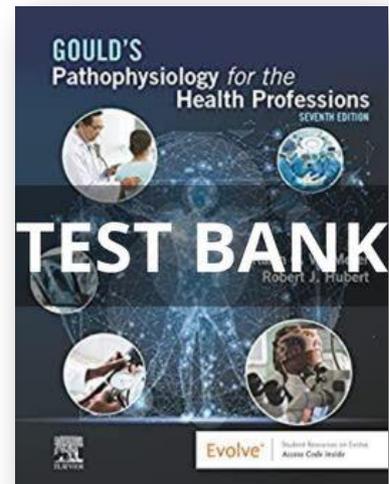
5. Etiology is defined as the study of the
  - a. causes of a disease.
  - b. course of a disease.
  - c. expected complications of a disease.
  - d. manifestations of a disease.

ANS: A

6. A type of cellular adaptation in which there is a decrease in cell size is referred to as
  - a. hypertrophy.
  - b. metaplasia.
  - c. anaplasia.
  - d. atrophy.

ANS: D

7. A change in a tissue marked by cells that vary in size and shape and show increased mitotic figures would be called



- a. metaplasia.
- b. atrophy.
- c. dysplasia.
- d. hypertrophy.

ANS: C

8. A deficit of oxygen in the cells usually due to respiratory or circulatory problems is called
- a. apoptosis.
  - b. ischemia.
  - c. hypertrophy.
  - d. necrosis.

ANS: B

9. When a group of cells in the body dies, the change is called
- a. ischemia.
  - b. gangrene.
  - c. hypoxia.
  - d. necrosis.

ANS: D

10. Rigorous weightlifting/body building regimens may result in the skeletal muscle cells undergoing
- a. hypertrophy.
  - b. dysplasia.
  - c. atrophy.
  - d. regeneration.

ANS: A

11. The term *cancer* refers to
- a. dysplasia.
  - b. hyperplasia.
  - c. metaplasia.
  - d. malignant neoplasm.

ANS: D

12. To which of the following does the term *apoptosis* refer?
- a. Increased rate of mitosis by certain cells
  - b. Ischemic damage to cells
  - c. Liquefaction of necrotic tissue
  - d. Preprogrammed cell self-destruction

ANS: D

13. Which of the following statements is TRUE?
- a. Alteration of DNA does not change cell function.
  - b. Damaged cells may be able to repair themselves.
  - c. All types of cells die at the same rate.
  - d. Mild ischemia causes immediate cell death.

ANS: B

14. Caseation necrosis refers to an area where
- a. cell proteins have been denatured.

- b. cells are liquefied by enzymes.
- c. dead cells form a thick cheesy substance.
- d. bacterial invasion has occurred.

ANS: C

15. Routine application of sun block to skin would be an example of
- a. an iatrogenic cause of cancer.
  - b. a preventive measure.
  - c. a precipitating factor.
  - d. a predisposing condition.

ANS: B

16. A circumstance that causes a sudden acute episode of a chronic disease to occur is termed
- a. latent stage.
  - b. predisposing factor.
  - c. incidence.
  - d. precipitating factor.

ANS: D

17. The term *homeostasis* refers to
- a. the causative factors in a particular disease.
  - b. maintenance of a stable internal environment.
  - c. a condition that triggers an acute episode.
  - d. a collection of signs and symptoms.

ANS: B

18. Which term is used to describe a new and secondary or additional problem that arises after the original disease has been established?
- a. Symptoms
  - b. Occurrence
  - c. Manifestations
  - d. Complication

ANS: D

19. Pathophysiology involves the study of
- a. the structure of the human body.
  - b. the functions of various organs in the body.
  - c. functional or structural changes resulting from disease processes.
  - d. various cell structures and related functions.

ANS: C

20. Which of the following is the best definition of epidemiology?
- a. The science of tracking the occurrence and distribution of diseases
  - b. The relative number of deaths resulting from a particular disease
  - c. Identification of a specific disease through evaluation of signs and symptoms
  - d. The global search for emerging diseases

ANS: A

21. Which of the following can cause cell injury or death?

1. Hypoxia
  2. Exposure to excessive cold
  3. Excessive pressure on a tissue
  4. Chemical toxins
- a. 1, 2
  - b. 2, 4
  - c. 1, 3, 4
  - d. 1, 2, 3, 4

ANS: D

22. All of the following are part of the Seven Steps to Health EXCEPT:

- a. Follow cancer screening guidelines.
- b. Use sun block agents whenever exposed.
- c. Participate in strenuous exercise on a regular daily basis.
- d. Choose high fiber, lower fat foods.

ANS: C

23. The term *disease* refers to

- a. the period of recovery and return to a normal healthy state.
- b. a deviation from the normal state of health and function.
- c. the treatment measures used to promote recovery.
- d. a basic collection of signs and symptoms.

ANS: B

24. A collection of signs and symptoms, often affecting more than one organ or system, that usually occur together in response to a certain condition is referred to as a(an)

- a. acute disease.
- b. multiorgan disorder.
- c. syndrome.
- d. manifestation.

ANS: C

25. All of the following statements are correct about cell damage EXCEPT:

- a. The initial stage of cell damage often causes an alteration in metabolic reactions.
- b. If the factor causing the damage is removed quickly, the cell may be able to recover and return to its normal state.
- c. If the noxious factor remains for an extended period of time, the damage becomes irreversible and the cell dies.
- d. Initially, cell damage does not change cell metabolism, structure, or function.

ANS: D

26. Which of the following conditions distinguishes double blind studies used in health research?

- a. Neither the members of the control group or the experimental group nor the person administering the treatment knows who is receiving the experimental therapy.
- b. Both groups of research subjects and the person administering the treatment know who is receiving the experimental therapy.
- c. The research subjects do not know, but the person administering the treatment knows who is receiving placebo or standard therapy.
- d. Only members of the control group know they are receiving standard therapy.

ANS: A

27. If the data collected from the research process confirm that the new treatment has increased effectiveness and is safe, this is called
- the placebo effect.
  - evidence-based research.
  - blind research studies.
  - approval for immediate distribution.

ANS: B

28. A short-term illness that develops very quickly with perhaps a high fever or severe pain is called
- acute.
  - latent.
  - chronic.
  - manifestation.

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ANS: A

29. The term *prognosis* refers to the
- period of recovery and return to a normal state.
  - expected outcome of the disease.
  - mortality and morbidity rates for a given population.
  - typical collection of signs and symptoms.

ANS: B

30. When prolonged ischemia occurs to an area of the heart, the resulting damage is referred to as
- atrophy.
  - liquefactive necrosis.
  - apoptosis.
  - infarction.

ANS: D

31. During the evaluation process for a new therapy's effectiveness and safety, a double blind study may be conducted during
- the first stage.
  - the second stage.
  - the third stage.
  - any of these stages.

ANS: C

32. Why are the predisposing factors for a specific disease important to health professionals?
- To predict the prognosis
  - To determine treatments
  - To develop preventive measures
  - To develop morbidity statistics

ANS: C

33. Cell damage may be caused by exogenous sources such as
- abnormal metabolic processes.
  - certain food additives.

- c. genetic defects.
- d. localized hypoxia.

ANS: B

34. Which of the following is usually included in a medical history?
1. Past illnesses or surgeries
  2. Current illnesses, acute and chronic
  3. Prescribed medication or other treatments
  4. Nonprescription drugs and herbal remedies
  5. Current allergies
- a. 1, 3
  - b. 2, 4, 5
  - c. 1, 3, 4
  - d. 1, 2, 3, 4, 5

ANS: D

35. A situation when there is a higher than expected number of cases of an infectious disease within a given area is called a/an
- a. epidemic.
  - b. exacerbation.
  - c. morbidity.
  - d. pandemic.

ANS: A

36. The term *pathogenesis* refers to
- a. the development of a disease or sequence of events related to tissue changes involved in the disease process.
  - b. the determination of the cause(s) involved in the development of a malignant neoplasm.
  - c. the specific signs and symptoms involved in the change from an acute disease to a chronic disease.

d. the changes in cells of affected tissue that result in necrosis.

ANS: A

37. A therapy that has been approved for use and may show additional potential to treat a different disease is termed “\_\_\_\_\_” use.
- a. over-the-counter
  - b. off-label
  - c. additional
  - d. conditional

ANS: B

38. A potential unwanted outcome of a primary condition, such as paralysis following the recovery from a stroke, is referred to as
- a. complication.
  - b. convalescence.
  - c. sequelae.
  - d. postcondition.

ANS: C

39. An infectious disease that spreads over wide regions of the globe is called a(an)
- a. pandemic.
  - b. endemic.
  - c. epidemic.
  - d. periodic.

ANS: A

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40. The type of necrosis that occurs when cell proteins are altered or denatured is referred to as
- a. liquefaction necrosis.
  - b. coagulative necrosis.
  - c. degenerative necrosis.
  - d. caseous necrosis.

ANS: B

**Chapter 02: Fluid, Electrolyte, and Acid-Base Imbalances**  
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**MULTIPLE CHOICE**

1. Choose the correct proportion of water to body weight to be expected in a healthy male adult's body:
- 30%
  - 45%
  - 60%
  - 70%

ANS: C

2. Choose the correct proportion of blood (to body weight) in an adult male's body:
- 30%
  - 20%
  - 10%
  - 4%

ANS: D

3. Which of the following is NOT part of the extracellular fluid compartment (ECF)?
- Blood
  - Cytoplasm
  - Cerebrospinal fluid
  - Transcellular fluid

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ANS: B

4. Insensible fluid loss refers to water lost through
- perspiration only.
  - feces only.
  - perspiration and expiration.
  - urine and feces.

ANS: C

5. The osmoreceptor cells controlling the thirst mechanism are located in the
- medulla oblongata.
  - thalamus.
  - epithalamus.
  - hypothalamus.

ANS: D

6. When the osmotic pressure of the blood is elevated above normal, water would shift from the
- blood into the cells.
  - interstitial compartment into the cells.
  - interstitial compartment into the blood.

d. cells into the interstitial compartment.

ANS: C

7. Which of the following would result from a deficit of plasma proteins?

- a. Increased osmotic pressure
- b. Decreased osmotic pressure
- c. Increased hydrostatic pressure
- d. Decreased hydrostatic pressure

ANS: B

8. Which of the following would cause edema?

- a. Decreased capillary hydrostatic pressure
- b. Increased capillary osmotic pressure
- c. Decreased capillary permeability
- d. Increased capillary permeability

ANS: D

9. Which of the following would likely be related to an elevated hematocrit reading?

- a. Fluid excess
- b. Fluid deficit
- c. Increased sodium level
- d. Decreased erythrocytes

ANS: B

10. Which of the following is a typical sign of dehydration?

- a. Rapid, strong pulse
- b. Low hematocrit
- c. Increased urine output
- d. Rough oral mucosa

ANS: D

11. Which of the following terms refers to a combination of decreased circulating blood volume combined with excess fluid in a body cavity?

- a. Dehydration
- b. Third-spacing
- c. Hypovolemia
- d. Water retention

ANS: B

12. Which of the following is the primary cation in the extracellular fluid?

- a. Sodium
- b. Potassium
- c. Calcium
- d. Iron

ANS: A

13. Which of the following is a common cause of hyponatremia?
- Loss of the thirst mechanism
  - Excessive sweating
  - Excessive aldosterone secretion
  - Prolonged period of rapid, deep respirations

ANS: B

14. Which of the following is a common effect of both hypokalemia and hyperkalemia?
- Skeletal muscle twitch and cramps
  - Oliguria
  - Elevated serum pH
  - Cardiac arrhythmias

ANS: D

15. Choose the correct effect of increased parathyroid hormone.
- Increased movement of calcium ions into the bones
  - Increased activation of vitamin D
  - Increased absorption of calcium from the digestive tract
  - Decreased reabsorption of calcium in the kidneys

ANS: C

16. Which of the following results from hypocalcemia?

- Low serum phosphate levels
  - Nausea and constipation
  - Skeletal muscle twitch and spasms
  - Weak cardiac contractions
- 1, 2
  - 1, 4
  - 2, 3
  - 3, 4

ANS: D

17. Which of the following causes tetany?

- Increased permeability of nerve membranes due to low serum calcium
- Excess calcium ions in skeletal muscle due to excess parathyroid hormone (PTH)
- Excess calcium ions inside somatic nerves as a result of neoplasms
- Increased stimulation of the nerves in the cerebral cortex

ANS: A

18. Paresthesia is an effect of

- hyperkalemia.
- hypokalemia.
- hyponatremia.
- hypernatremia.

ANS: B

19. In which of the following processes is the phosphate ion NOT a major component?