1

Student: _____

1. The main source of new drugs derived today is:
   A. Synthetic sources
   B. Animal sources
   C. Plant sources
   D. Mineral sources

2. The nonproprietary name of a medication is also known as the:
   A. Trade name
   B. Generic name
   C. Chemical name
   D. None of these are correct.

3. Toxic effects that are most often fatal occur from:
   A. Low doses
   B. Therapeutic doses taken PRN
   C. High doses
   D. Therapeutic doses taken on schedule

4. Examples of common adverse effects would include all of these *except:*
   A. Persistent diarrhea
   B. Vomiting
   C. Confusion
   D. Anaphylaxis

5. Which of the following would *not* be considered an adverse effect from taking an oral antibiotic?
   A. Extravasion
   B. Diarrhea
   C. Nausea
   D. Vomiting

6. The most current drug reference source would be:
   A. *Physicians' Desk Reference*
   B. *Drug Facts and Comparisons*
   C. *United States Pharmacopeia/National Formulary*
   D. *Merck Index*

7. When epinephrine is administered to stimulate heart rate, the medication is acting as a(n)
   A. Antagonist
   B. Partial agonist
   C. Agonist
   D. Partial antagonist

8. Mrs. Breaux almost became comatose after receiving an overdose of morphine while in the hospital. In order to reverse this effect, the doctor ordered naloxone, which served as a(n)
   A. Partial antagonist
   B. Agonist
   C. Partial agonist
   D. Antagonist

9. The phenomenon that occurs upon taking additional doses of acetaminophen for pain when a 100 percent response has been attained is called
   A. Ceiling effect
   B. Tolerance
   C. First-pass effect
   D. Purkinje effect

10. A medication administered intravenously will have a quicker _____ than a medication administered orally.
   A. duration of action
   B. onset of action
   C. dosage form
   D. route of administration

11. Drug potencies are compared using what value on a dose-response curve?
   A. Therapeutic index
   B. Half-life
   C. ED50
   D. LD50

12. The therapeutic index of a drug is determined by comparing the _____ to the _____ in order to predict drug safety.
   A. half-life; LD50
   B. ED50; LD50
   C. LD50; half-life
   D. LD50; ED50

13. What action follows after insulin binds to a receptor?
   A. A series of changes will occur inside the cell.
   B. The drug is immediately transformed into a metabolite.
   C. Changes to the cell's membrane potential will stop all conduction.
   D. The drug will signal additional drug molecules to the area.

14. Competitive antagonism occurs when:
   A. Two agonists compete for the same receptor.
   B. An agonist and an antagonist compete for the same receptor.
   C. An antagonist directly inactivates an agonist.
   D. An antagonist cancels out the effect of an agonist by binding to a unique receptor.

15. In a graded dose-response curve, one would expect a more potent medication to cause the curve to shift in what direction?
   A. Up
   B. Down
   C. Left
   D. Right

16. In toxicity testing, animals are injected with a particular dose of medication so that an LD50 value can be determined. The best curve to represent the findings would be a:
   A. Time-response curve
   B. Scatter plot
   C. Graded dose-response curve
   D. Quantal dose-response curve

17. What type of curve should be used for representing data when a proper dosing frequency is being determined?
   A. Time-response curve
   B. Scatter plot
   C. Graded dose-response curve
   D. Quantal dose-response curve

18. Taking two aspirin tablets instead of one will always result in:
    A. Two times the analgesic effect
    B. An enhanced analgesic effect
    C. No change in analgesic effect
    D. Toxicity

19. Three medications have the following therapeutic index values: 2, 4, and 0.5. Which medication is the safest?
    A. 0.5
    B. 2
    C. 4
    D. None of these are safe to use.

20. Which of the following would *not* be considered a dose-dependent adverse effect?
    A. Teratogen
    B. Carcinogen
    C. Kidney damage
    D. Idiosyncrasy

1 Key

1. The main source of new drugs derived today is:
(p. 6) **A.** Synthetic sources
B. Animal sources
C. Plant sources
D. Mineral sources

Despite the many examples of drugs obtained from plants and living organisms, the main source of new drugs today is chemical synthesis.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications
Blooms: Remembering
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Easy
Hitner - Chapter 001 #1
Learning Outcome: 1.1 Define pharmacology and its major subdivisions.

2. The nonproprietary name of a medication is also known as the:
(p. 10) A. Trade name
B. Generic name
C. Chemical name
D. None of these are correct.

The nonproprietary name is more commonly referred to as the generic name.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Remembering
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Easy
Hitner - Chapter 001 #2
Learning Outcome: 1.6 Identify drug nomenclature and the different terminology used in naming drugs.

3. Toxic effects that are most often fatal occur from:
(p. 6) A. Low doses
B. Therapeutic doses taken PRN
C. High doses
D. Therapeutic doses taken on schedule

At very high doses, toxic effects may occur that can be fatal.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Understanding
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions. 12. Describe the relationship between anatomy and physiology of all body systems and medications used for treatment in each.
Difficulty: Easy
Hitner - Chapter 001 #3
Learning Outcome: 1.2 Describe what a drug is and explain the differences between a therapeutic effect, side effect, and toxic effect.

4. Examples of common adverse effects would include all of these *except:*
(p. 6)
A. Persistent diarrhea
B. Vomiting
C. Confusion
D. Anaphylaxis

Adverse effects are also undesired effects, but these are effects that may be harmful (persistent diarrhea, vomiting, or central nervous system disturbances such as confusion) or that with prolonged treatment may cause conditions that affect the function of vital organs such as the liver or kidney.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Understanding
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions. 12. Describe the relationship between anatomy and physiology of all body systems and medications used for treatment in each.
Difficulty: Easy
Hitner - Chapter 001 #4
Learning Outcome: 1.2 Describe what a drug is and explain the differences between a therapeutic effect, side effect, and toxic effect.

5. Which of the following would *not* be considered an adverse effect from taking an oral antibiotic?
(p. 9)
A. Extravasion
B. Diarrhea
C. Nausea
D. Vomiting

Oral drugs often cause nausea, vomiting, and diarrhea because of gastrointestinal (GI) irritation.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Understanding
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions. 12. Describe the relationship between anatomy and physiology of all body systems and medications used for treatment in each.
Difficulty: Easy
Hitner - Chapter 001 #5
Learning Outcome: 1.5 Recall the guidelines of drug safety and drug approval by the FDA.

6. The most current drug reference source would be:
(p. 10)
A. *Physicians' Desk Reference*
B. *Drug Facts and Comparisons*
C. *United States Pharmacopeia/National Formulary*
D. *Merck Index*

This index provides the most current drug information on a regular basis.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications. 9. Medical Office Clinical Procedures d. Recognize and understand various treatment protocols.
Blooms: Understanding
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Easy
Hitner - Chapter 001 #6
Learning Outcome: 1.7 Recognize the drug references and understand the information they provide.

7. When epinephrine is administered to stimulate heart rate, the medication is acting as a(n)
(p. 7)
A. Antagonist
B. Partial agonist
C. Agonist
D. Partial antagonist

Drugs that bind to specific receptors and produce a drug action are called agonists.

ABHES Competency: 2. Anatomy and Physiology b. Identify and apply the knowledge of all body systems; their structure and functions; and their common diseases, symptoms, and etiologies.
Blooms: Applying
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Medium
Hitner - Chapter 001 #7
Learning Outcome: 1.3 Explain the terms site of action, mechanism of action, receptor site, agonist, and antagonist.

8. Mrs. Breaux almost became comatose after receiving an overdose of morphine while in the hospital.
(p. 7) In order to reverse this effect, the doctor ordered naloxone, which served as a(n)
A. Partial antagonist
B. Agonist
C. Partial agonist
D. Antagonist

Naloxone, a morphine antagonist, is administered to prevent, or antagonize, the effects of morphine in cases of morphine overdose.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications. 9. Medical Office Clinical Procedures d. Recognize and understand various treatment protocols.
Blooms: Applying
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Medium
Hitner - Chapter 001 #8
Learning Outcome: 1.3 Explain the terms site of action, mechanism of action, receptor site, agonist, and antagonist.

9. The phenomenon that occurs upon taking additional doses of acetaminophen for pain when a 100
(p. 8) percent response has been attained is called
A. Ceiling effect
B. Tolerance
C. First-pass effect
D. Purkinje effect

The ceiling effect reflects the limit of some drug classes to produce a particular effect. Above a certain dosage no further increase in effect is observed.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Applying
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Medium
Hitner - Chapter 001 #9
Learning Outcome: 1.4 Explain the relationship between drug dosages and drug responses and time.

10. A medication administered intravenously will have a quicker _____ than a medication administered orally. *(p. 9)*

A. duration of action
B. onset of action
C. dosage form
D. route of administration

The time from drug administration to the first observable effect is known as the onset of action.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications. 9. Medical Office Clinical Procedures d. Recognize and understand various treatment protocols.
Blooms: Applying
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Medium
Hitner - Chapter 001 #10
Learning Outcome: 1.4 Explain the relationship between drug dosages and drug responses and time.

11. Drug potencies are compared using what value on a dose-response curve? *(p. 8)*

A. Therapeutic index
B. Half-life
C. ED50
D. LD50

The ED50 can be used to compare the potency of drugs that produce the same response.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Applying
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Medium
Hitner - Chapter 001 #11
Learning Outcome: 1.4 Explain the relationship between drug dosages and drug responses and time.

12. The therapeutic index of a drug is determined by comparing the _____ to the _____ in order to predict drug safety. *(p. 9)*

A. half-life; LD50
B. ED50; LD50
C. LD50; half-life
D. LD50; ED50

The therapeutic index (TI) is a ratio of the LD50 to the ED50 of a drug.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Applying
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Medium
Hitner - Chapter 001 #12
Learning Outcome: 1.5 Recall the guidelines of drug safety and drug approval by the FDA.

13. What action follows after insulin binds to a receptor? *(p. 7)*

A. A series of changes will occur inside the cell.
B. The drug is immediately transformed into a metabolite.
C. Changes to the cell's membrane potential will stop all conduction.
D. The drug will signal additional drug molecules to the area.

The attachment, or binding, of a drug to its receptors begins a series of cell changes referred to as the drug action.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Analyzing
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Hard
Hitner - Chapter 001 #13
Learning Outcome: 1.3 Explain the terms site of action, mechanism of action, receptor site, agonist, and antagonist.

14. Competitive antagonism occurs when:
(p. 7)
A. Two agonists compete for the same receptor.
B. An agonist and an antagonist compete for the same receptor.
C. An antagonist directly inactivates an agonist.
D. An antagonist cancels out the effect of an agonist by binding to a unique receptor.

When both agonist and antagonist drugs bind to the same receptor and are administered together, they compete with each other for the same receptor site.

ABHES Competency: 6. Pharmacology b. Properly utilizePDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Analyzing
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Hard
Hitner - Chapter 001 #14
Learning Outcome: 1.3 Explain the terms site of action, mechanism of action, receptor site, agonist, and antagonist.

15. In a graded dose-response curve, one would expect a more potent medication to cause the curve to
(p. 8)
shift in what direction?
A. Up
B. Down
C. Left
D. Right

In Figure 1.2, the ED50 of drug A is 10 mg while the ED50 of drug B is 20 mg. Therefore, drug A is twice as potent as drug B.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Analyzing
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Hard
Hitner - Chapter 001 #15
Learning Outcome: 1.4 Explain the relationship between drug dosages and drug responses and time.

16. In toxicity testing, animals are injected with a particular dose of medication so that an LD50 value can
(p. 8)
be determined. The best curve to represent the findings would be a:
A. Time-response curve
B. Scatter plot
C. Graded dose-response curve
D. Quantal dose-response curve

Quantal (referred to as all-or-none) dose response curves are used to show the percentage of a human or animal population that responds to a specific drug dosage.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Analyzing
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Hard
Hitner - Chapter 001 #16
Learning Outcome: 1.4 Explain the relationship between drug dosages and drug responses and time.

17. *(p. 8)* What type of curve should be used for representing data when a proper dosing frequency is being determined?

A. Time-response curve
B. Scatter plot
C. Graded dose-response curve
D. Quantal dose-response curve

The relationship of time and the plasma drug concentration is known as the time-plasma drug concentration curve.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Analyzing
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Hard
Hitner - Chapter 001 #17
Learning Outcome: 1.4 Explain the relationship between drug dosages and drug responses and time.

18. *(p. 8)* Taking two aspirin tablets instead of one will always result in:

A. Two times the analgesic effect
B. An enhanced analgesic effect
C. No change in analgesic effect
D. Toxicity

The main feature of the dose-response relationship is that a drug response is proportional to the dose. As the dose increases, so does the magnitude of the response.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Analyzing
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Hard
Hitner - Chapter 001 #18
Learning Outcome: 1.4 Explain the relationship between drug dosages and drug responses and time.

19. *(p. 9)* Three medications have the following therapeutic index values: 2, 4, and 0.5. Which medication is the safest?

A. 0.5
B. 2
C. 4
D. None of these are safe to use.

This index indicates that four times as much drug is needed to produce a lethal effect in 50 percent of the animals as is needed to produce the therapeutic effect in 50 percent of the animals.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Analyzing
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Hard
Hitner - Chapter 001 #19
Learning Outcome: 1.5 Recall the guidelines of drug safety and drug approval by the FDA.

20. Which of the following would *not* be considered a dose-dependent adverse effect?
(p. 9)
A. Teratogen
B. Carcinogen
C. Kidney damage
D. Idiosyncrasy

A few adverse effects are not dose-dependent. These effects, such as drug idiosyncrasy and drug allergy, are determined by individual variation.

ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.
Blooms: Analyzing
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.
Difficulty: Hard
Hitner - Chapter 001 #20
Learning Outcome: 1.5 Recall the guidelines of drug safety and drug approval by the FDA.

1 Summary

Category	*# of Questions*
ABHES Competency: 2. Anatomy and Physiology b. Identify and apply the knowledge of all body systems; their structure and functions; and their common diseases, symptoms, and etiologies.	1
ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications	1
ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.	14
ABHES Competency: 6. Pharmacology b. Properly utilize PDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications. 9. Medical Office Clinical Procedures d. Recognize and understand various treatment protocols.	3
ABHES Competency: 6. Pharmacology b. Properly utilizePDR, drug handbook, and other drug references to identify a drugs classification, usual dosage, usual side effects, and contraindications.	1
Blooms: Analyzing	8
Blooms: Applying	6
Blooms: Remembering	2
Blooms: Understanding	4
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions.	17
CAAHEP Competency: I. Anatomy and Physiology 11. Identify the classifications of medications, including desired effects, side effects, and adverse reactions. 12. Describe the relationship between anatomy and physiology of all body systems and medications used for treatment in each.	3
Difficulty: Easy	6
Difficulty: Hard	8
Difficulty: Medium	6
Hitner - Chapter 001	20
Learning Outcome: 1.1 Define pharmacology and its major subdivisions.	1
Learning Outcome: 1.2 Describe what a drug is and explain the differences between a therapeutic effect, side effect, and toxic effect.	2
Learning Outcome: 1.3 Explain the terms site of action, mechanism of action, receptor site, agonist, and antagonist.	4
Learning Outcome: 1.4 Explain the relationship between drug dosages and drug responses and time.	7
Learning Outcome: 1.5 Recall the guidelines of drug safety and drug approval by the FDA.	4
Learning Outcome: 1.6 Identify drug nomenclature and the different terminology used in naming drugs.	1
Learning Outcome: 1.7 Recognize the drug references and understand the information they provide.	1