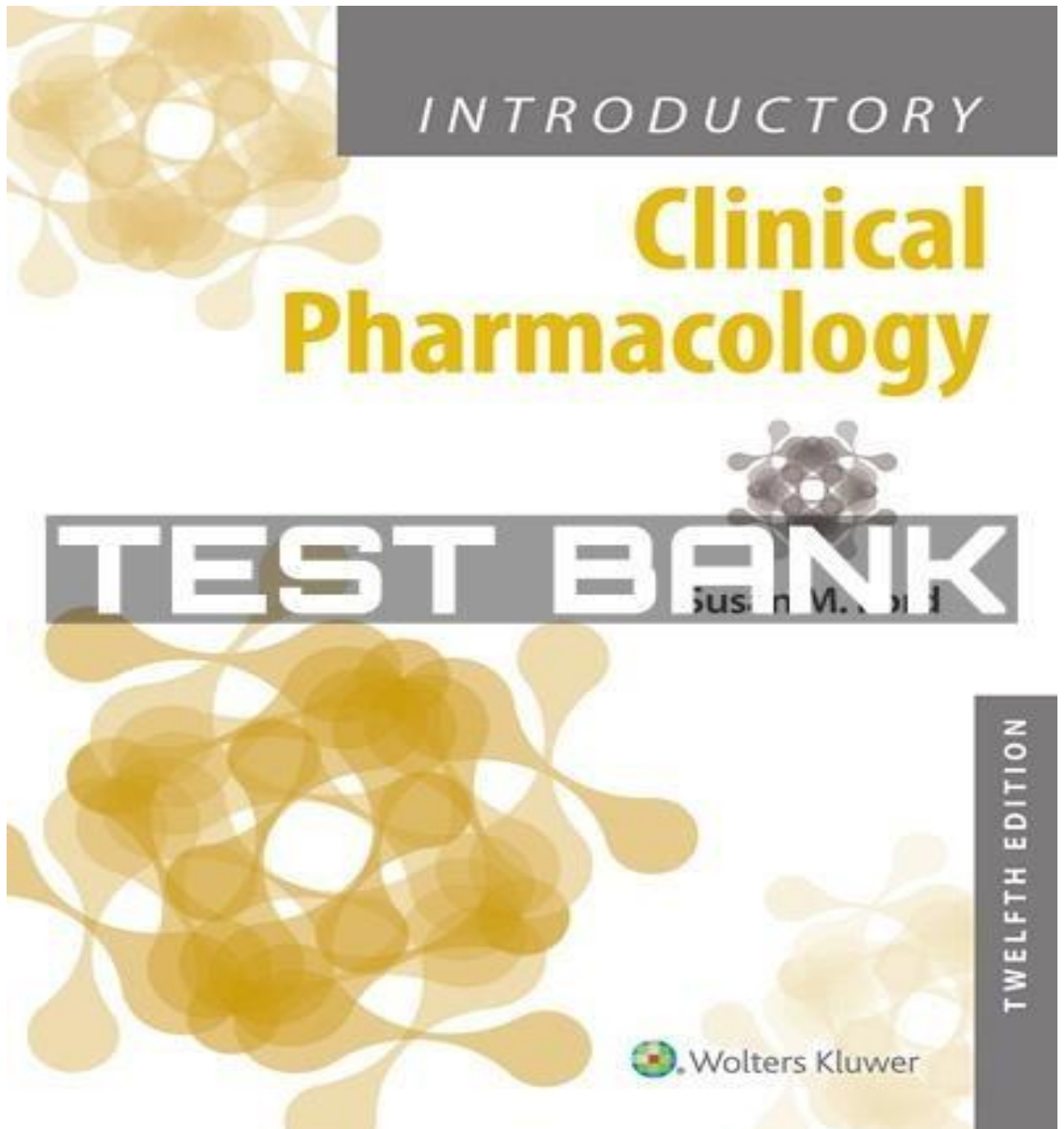


# TEST BANK

INTRODUCTORY CLINICAL PHARMACOLOGY 12TH EDITION

*by Susan M Ford*

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## Chapter 01: General Principles of Pharmacology

### **Ford: Introductory Clinical Pharmacology 12th Edition**

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1. After teaching a group of students about the basics of pharmacology, the students will be able to choose which aspect as the most critical to remember?
  - A) Drug name
  - B) Drug class
  - C) Drug action
  - D) Drug source

Answer: C

Rationale: Pharmacology is the study of drugs and its action on living organisms. Thus, an essential aspect of pharmacology is drug action. An understanding of the drug name, drug class, and drug source is important, but the most critical aspect related to pharmacology is how the drug acts in the body.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 1

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 3, Introduction

2. A nurse suspects the client had an adverse reaction to a prescribed medication due to an interaction with an unreported over-the-counter supplement. Which action by the nurse will **best** assist in preventing future similar incidents?
  - A) File a report with MedWatch
  - B) File a report with the State Board of Nursing
  - C) Instruct the client to avoid combining medications in the future
  - D) Document the incident and report it to the health care provider

Answer: A

Rationale: Nurses play an important role in monitoring for adverse reactions. Therefore, it is important to submit reports, even if there is uncertainty about the cause–effect relationship. The FDA protects the identity of those who voluntarily report adverse reactions.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 9

Cognitive Level: Apply

Client Needs: Safe and Effective Care Environment: Safety and Infection Control

Integrated Process: Clinical Problem-solving Process (Nursing Process)

Reference: p. 7, Box 1.1 MedWatch and Reporting Adverse Events

3. A nurse is assessing a client and notes the client has developed swelling of the eyelids and lips after administration of a prescribed medication. What does the nurse interpret this finding to specifically indicate?
- A) Mild allergic reaction
  - B) Anaphylactic shock
  - C) Angioedema
  - D) Drug idiosyncrasy

Answer: C

Rationale: Angioedema is a type of allergic drug reaction manifested by the collection of fluid in the subcutaneous tissues, most commonly affecting the eyelids, lips, mouth, and throat. Allergic reactions can be manifested by a wide range of signs and symptoms such as itching, rashes, and hives. Anaphylactic shock is a serious allergic reaction that requires immediate medical attention. Drug idiosyncrasy describes any unusual or abnormal reaction to a drug, one that is different from the one normally expected.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 5

Cognitive Level: Apply

Client Needs: Physiological Integrity: Reduction of Risk Potential Integrated Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 12, Allergic Drug Reactions

4. The nurse is preparing to teach a client about a new drug which is in the fourth phase of development. Which activity will the nurse explain **best** illustrates this phase?
- A) Health care providers report adverse effects to FDA.
  - B) Healthy volunteers are involved in the test.
  - C) In vitro tests are performed using human cells.
  - D) The drug is given to clients with the disease.

Answer: A

Rationale: The postmarketing surveillance phase of drug development encourages health care professionals to report adverse effects of drugs to the FDA using MedWatch. Phase 1 of clinical testing involves 20 to 100 healthy volunteers. In vitro testing of the drug on human or animal cells is done in the pre-FDA phase. In Phase 2 of clinical testing, the drug is given to clients with the disease for which the drug is manufactured.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 4

Cognitive Level: Apply

Client Needs: Health Promotion and Maintenance

Integrated Process: Teaching/Learning Reference: p. 7,

Concept Mastery Alert

5. A nurse is assessing a pregnant client who admits to having a cocaine addiction. Which condition of the baby after birth should the nurse explain and prepare the client for?
- A) Diabetes
  - B) Hypertension
  - C) Addiction to drugs
  - D) CNS defects

Answer: C

Rationale: The nurse informs the client that children born to mothers using addictive drugs are often born with an addiction to the drug. Children born to mothers who are addicted to cocaine are not known to be born with diabetes, CNS defects, or hypertension.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 6

Cognitive Level: Apply

Client Needs: Health Promotion and Maintenance

Integrated Process: Teaching/Learning

Reference: p. 11, Drug Use, Pregnancy, and Lactation

6. A client arrives at the health care clinic and reports taking several pills for a headache and severe cough without relief. Which adverse effect should the nurse be aware may develop from this combination?
- A) Gastrointestinal bleeding
  - B) Breathing difficulties
  - C) Liver damage
  - D) Anaphylaxis

Answer: C

Rationale: Consumers should be urged to carefully read the directions before taking over-the-counter (OTC) drugs, as these drugs are not without risks. For example, acetaminophen, commonly used for pain relief, is also found in many OTC products, such as cough and cold remedies. When taken for both pain and in a cold remedy, this accumulative amount of the drug can potentially harm a person's liver. Aspirin presents the potential adverse reaction of gastrointestinal bleeding. An allergic reaction could result in breathing difficulties and anaphylaxis.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 5

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies Integrated

Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 5,

Nonprescription Drugs

7. The nurse notes on assessment after administration of a drug that the client has developed itching and a skin rash. The nurse interprets these findings as indicating which possible reaction?
- A) Toxicity
  - B) Allergic reaction
  - C) Angioedema
  - D) Crystalluria

Answer: B

Rationale: Allergic reactions are manifested by a variety of signs and symptoms including itching, skin rashes, and hives. Swollen eyelids, lips, and mouth are some of the symptoms of angioedema, an allergic drug reaction that may block the airway, causing asphyxia. Toxicity or toxic reactions are caused when blood concentration levels exceed the therapeutic level of drugs. Reduced blood pressure is called hypotension. Crystals in the urine are symptoms of crystalluria.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 5

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies Integrated

Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 12,

Allergic Drug Reactions

8. The nurse is monitoring a client with heart failure for effectiveness of the digoxin therapy. Which factor should the nurse closely monitor for potential signs of toxicity?
- A) Seizure activity

- B) Drug blood level
- C) Urinary output
- D) Blood pressure

Answer: B

Rationale: The nurse should monitor the client's blood level of the drug to ensure that the level remains within the therapeutic range. Monitoring seizure activity, urination frequency, and blood pressure will not prevent toxicity. Seizure activity is unrelated to digoxin or heart failure.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 9

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies Integrated

Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 14, Toxic Reactions

9. The nurse is assessing a client's response to sleeping pills and notes continued restlessness and inability to sleep. After an increased dose leads to sleep, which factor should the nurse investigate first?
- A) Is this related to a genetic deficiency?
  - B) Is the drug accumulating in the client's body?
  - C) Is the client now tolerant to the drug?
  - D) Is this a toxic reaction?

Answer: C

Rationale: The client has developed drug tolerance and has to be administered an increased dosage of the drug to achieve the desired effect. Cumulative drug effect occurs when the body is unable to metabolize and excrete one (normal) dose of a drug before the next dose is given. Drug idiosyncrasy is a term used to describe any unusual or abnormal reaction to a drug, which can be related to genetics.

Toxic reactions are caused when blood concentration levels exceed the therapeutic levels of a drug.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 7

Cognitive Level: Analyze

Client Needs: Physiological Integrity: Pharmacological Therapies Integrated

Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 13, Drug Tolerance

10. An unconscious client is brought to the emergency department via ambulance after family members were unable to wake up the client after coming home drunk and taking a sleeping pill. The nurse will explain to the family that the client is most likely experiencing which type of drug reaction?
- A) Additive
  - B) Synergistic
  - C) Antagonistic
  - D) Toxic

Answer: B

Rationale: A synergistic drug reaction occurs when drugs interact with each other and produce a sum greater than the sum of their separate actions. An additive drug reaction occurs when the combined effect of two drugs is equal to the sum of each drug given alone. An antagonistic drug reaction occurs when one drug interferes with the action of another, causing neutralization or a decrease in the effect of one drug. Toxic drug reactions are caused when blood concentration levels exceed the therapeutic levels of a drug.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 8

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 14, Synergistic Drug Reaction 21,

11. A nurse has administered drugs to a client as per the health care provider's orders. Which activity should the nurse perform after administering the prescribed drugs?
- A) Record symptoms of the condition.
  - B) Perform a culture and sensitivity test.
  - C) Obtain history of drug allergy.
  - D) Check for adverse drug reactions.

Answer: D

Rationale: After administering the drug to the client, the nurse should observe the client for adverse drug reactions. Recording symptoms of infection, performing a culture and sensitivity test, and obtaining a history of drug allergy are typically performed by the nurse in the pre-administration assessment stage.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 9

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies Integrated

Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 16,

Nursing Implications With Drug Actions

12. The nurse is teaching a client about a newly prescribed medication which is an enteric-coated tablet. Which statement by the nurse **best** explains this form of medication?
- A) “The medication dissolves directly from the stomach into the body.”
  - B) “The drug breaks up into pieces as it moves through the stomach.”
  - C) “The medication bypasses the GI tract and goes quickly into the bloodstream.”
  - D) “The drug dissolves into fragments after it reaches the small intestine.”

Answer: D

Rationale: Enteric-coated tablets disintegrate or fragment after reaching the alkaline medium of the small intestine. Tablets and capsules break up into small particles and dissolve into body fluids in the gastrointestinal tract. Liquids and parenteral drugs are quickly absorbed into the body system.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 5 Cognitive

Level: Understand

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 8, Pharmaceutic Phase

13. After teaching a group of nursing students about pharmacokinetics, the instructor determines that the teaching was successful when the students identify which phase as first?
- A) Body changes drug for excretion.
  - B) Drug is made available for use in the body.
  - C) Drug is transported throughout the body.
  - D) Drug is eliminated from the body.

Answer: B

Rationale: Pharmacokinetics refers to the transportation activity of drugs in the body after administration. The first component is absorption. This is followed by distribution, metabolism, and finally excretion.

Question Format: Multiple Choice



Chapter: 1

Learning Objective: 5 Cognitive

Level: Understand

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 8, Pharmacokinetic Phase

14. A client is considering using herbal supplements and asks the nurse about them. Which response by the nurse would be **most** appropriate?
- A) "Herbal supplements are safe to use because they are regulated closely."
  - B) "Herbal supplements can affect the way other medications will act."
  - C) "Taking more than the recommended amount usually is not harmful because they are natural."
  - D) "The risk of the supplement interacting with any prescription medications is extremely low."

Answer: B

Rationale: The nurse needs to explain to the client that just because an herbal supplement is labeled "natural" does not mean the supplement is safe or without harmful effects. Herbal supplements can act the same way as drugs and can cause medical problems if not used correctly or if taken in large amounts. Herbal supplements are not regulated by the FDA, so products lack standardization in relation to purity and potency. In addition, the client should be warned not to take more than the recommended dose of any herbal health product or supplement.

The problems that these products can cause are much more likely to occur if the client takes too much or takes them for too long.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 10

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 17, Box 1.2 Teaching Points When Discussing Herbal Therapy

15. A nurse is reading a journal article about seasonal allergies and comes across the name of the drug loratadine. The nurse determines this drug name as which type?
- A) Chemical
  - B) Generic
  - C) Trade
  - D) Brand

Answer: B

Rationale: The generic name is the name given to a drug that can be made or marketed by any company and is the name given to the drug by the FDA. The chemical name is the scientific term that describes the molecular structure of the drugs, typically the chemical components. The trade or brand name of the drug is the name selected by a specific company for marketing purposes and is followed by a trademark symbol or registered trademark symbol.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 2 Cognitive

Level: Understand

Client Needs: Physiological Integrity: Pharmacological Therapies Integrated

Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 4, Drug Names

16. A nursing instructor determines a class on drug development is successful when the students correctly choose which test group as involved in the initial process?
- A) Small group of healthy volunteers
  - B) People who have the disease
  - C) Live animals
  - D) Large numbers of clients

Answer: C

Rationale: Initially, drug testing begins with testing in an artificial environment such as a test tube, and then this testing is followed by testing on live animals. Next, clinical testing occurs with each phase involving a larger number of people. First, a small group of 20 to 100 healthy volunteers are tested; then testing is performed on people who have the disease or condition. Last, the drug is given to large numbers of clients in medical research centers.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 4 Cognitive

Level: Understand

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 6, Drug Development

17. After a class on pharmacokinetics, the nursing students can correctly choose which site for the metabolism of most drugs?
- A) Liver
  - B) Lungs
  - C) Kidneys
  - D) Intestinal mucosa

Answer: A

Rationale: Although the kidneys, lungs, plasma, and intestinal mucosa may aid in the metabolism of drugs, most drugs are metabolized by the liver.

Question Format: Multiple Choice

Chapter: 1

Learning Objective: 5

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 10, Metabolism

18. A nursing student reviews information about a drug and its action before preparing and administering the drug to a client. Which resources are the **best** choice for this student to consult? Select all that apply.
- A) Nursing instructor
  - B) Nurse assigned to the client
  - C) Clinical drug reference
  - D) Prescribing health care provider
  - E) Clinical pharmacist

Answer: C, E

Rationale: Although the nursing student can ask the nursing instructor, the nurse assigned to the client and the prescribing health care provider are the best choices to consult for information about the drug. The best choices for drug information would include an appropriate drug reference and the clinical pharmacist.

Question Format: Multiple Select

Chapter: 1

Learning Objective: 9

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies Integrated

Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 16,

Nursing Implications with Drug Actions

19. The nursing instructor is preparing to teach about various sources used for developing medication. Which sources should the instructor include in the discussion? Select all that apply.
- A) Plants
  - B) Synthetic sources
  - C) Mold

- D) Minerals
- E) Animals

Answer: A, B, D

Rationale: Medications are derived from natural sources (e.g., plants and minerals) as well as created synthetically in a laboratory.

Question Format: Multiple Select

Chapter: 1

Learning Objective: 1

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 3, Introduction

20. The nursing instructor determines the class discussion about the various names a drug will have was successful when the students correctly choose which categories of names? Select all that apply.
- A) Chemical name
  - B) Official name
  - C) Pharmacologic name
  - D) Trade name
  - E) Nonproprietary name

Answer: A, B, D, E

Rationale: Throughout the process of development, drugs may have several names assigned to them including a chemical name, a generic (nonproprietary) name, an official name, and a trade or brand name.

Question Format: Multiple Select

Chapter: 1

Learning Objective: 2

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies Integrated

Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 4, Drug Names

21. The nursing student is aware that the action of a drug can be predicted by its classification; which is determined by which factors? Select all that apply.
- A) The chemical type of the drug's active ingredient
  - B) The way the drug is used to treat a specific condition
  - C) The generic name of the drug

- D) The trade name of the drug
- E) The nonproprietary name of the drug

Answer: A, B

Rationale: A drug may be classified by the chemical type of the active ingredient or by the way it is used to treat a particular condition. Each drug can be classified into one or more drug classes. Generic, trade, and nonproprietary refer to how a drug is named, not classified.

Question Format: Multiple Select

Chapter: 1

Learning Objective: 3 Cognitive

Level: Understand

Client Needs: Physiological Integrity: Pharmacological Therapies Integrated

Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 5,

Drug Classes and Categories

22. A group of nursing students are learning to categorize drugs into the various Food and Drug Administration (FDA) categories. Which categories are established by the FDA? Select all that apply.
- A) Metabolite
  - B) Noncontrolled substance
  - C) Prescription
  - D) Nonprescription
  - E) Controlled substance

Answer: C, D, E

Rationale: Once drugs are approved for use, the FDA assigns the drug to one of the following categories: prescription, nonprescription, or controlled substance. Metabolite refers to the inactive form of the drug. Noncontrolled substance is a term that is not used.

Question Format: Multiple Select

Chapter: 1

Learning Objective: 3

Cognitive Level: Analyze

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 5, Drug Classes and Categories

23. The nursing instructor is explaining the safe use of prescription drugs. After the discussion, the students correctly choose which nursing actions as being the **most** important? Select all that apply.
- A) Administering drugs

- B) Monitoring clients for drug effects
- C) Prescribing drugs
- D) Evaluating clients for toxic effects
- E) Educating clients/caregivers about drugs

Answer: A, B, D, E

Rationale: In the institutional setting, the nurse's role to ensure safe use of prescription drugs includes administering drugs, monitoring drug effects, evaluating for toxic effects, and educating clients and caregivers about drugs. Question Format: Multiple Select

Chapter: 1

Learning Objective: 9

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies Integrated

Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 5, Prescription Drugs

24. The nurse is preparing to teach a client about a new drug the health care provider has prescribed. Which information does the nurse expect to find on the prescription? Select all that apply.
- A) Name of the drug
  - B) Dosage of the drug
  - C) Method of drug administration
  - D) Times of drug administration
  - E) Licensed prescriber's signature

Answer: A, B, C, D, E

Rationale: The prescription must contain the client's name, the name of the drug, the dosage, the method and times of administration, and the signature of the licensed health care provider prescribing the drug.

Question Format: Multiple Select

Chapter: 1

Learning Objective: 3

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies Integrated

Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 5, Prescription Drugs

25. After a class discussion, a group of nursing students are able to point out which characteristics are applicable to nonprescription medications? Select all that apply.

- A) Require a licensed health care provider's signature
- B) Are referred to as over-the-counter drugs
- C) Can be taken without risk to the client
- D) Have certain labeling requirements
- E) Should be taken only as directed on the label

Answer: B, D, E

Rationale: Nonprescription drugs are often referred to as over-the-counter (OTC) drugs. They do not require a prescription (a licensed health care provider's signature) but do not come without risk to the client. The federal government has imposed labeling requirements of OTC drugs, and they should only be taken as directed by the label unless under the supervision of a health care provider.

Question Format: Multiple Select

Chapter: 1

Learning Objective: 3 Cognitive

Level: Understand

Client Needs: Physiological Integrity: Pharmacological Therapies

Integrated Process: Teaching/Learning

Reference: p. 5, Nonprescription Drugs

26. A nursing student is preparing information about the Controlled Substances Act of 1970. The student can correctly teach a client which factors are regulated by the Act? Select all that apply.
- A) Manufacturing
  - B) Elimination
  - C) Distribution
  - D) Formulation
  - E) Dispensing

Answer: A, C, E

Rationale: The Controlled Substances Act of 1970 regulates the manufacture, distribution, and dispensing of drugs classified as controlled substances.

Elimination refers to the excretion of drugs from the body, a pharmacokinetic activity.

The act does not address formulation of the drug.

Question Format: Multiple Select

Chapter: 1

Learning Objective: 3

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological Therapies Integrated

Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 6, Controlled Substances

27. A nursing instructor is preparing to teach a group of students about the Orphan Drug Program. The instructor determines the class is successful after the students choose which points as relating to the program? Select all that apply.
- A) Encourages the development and marketing of products to treat rare diseases
  - B) Grants provisional approval with a written commitment from the drug company to formally demonstrate client benefits
  - C) Provides for incentives, such as research grants, protocol assistance, and special tax credits, to develop products to treat rare diseases
  - D) Grants 7 years of exclusive marketing rights to the manufacturer if approved
  - E) Accelerates approval of drugs based on preliminary evidence before formal demonstration of client benefits

Answer: A, C, D

Rationale: The Orphan Drug Program encourages the development and marketing of products used to treat rare diseases. The program provides incentives to encourage manufacturers to develop orphan drugs. If approved, the manufacturer has 7 years of exclusive marketing rights. Accelerated programs involve provisional approval and approval based on preliminary evidence.

Question Format: Multiple Select

Chapter: 1

Learning Objective: 4 Cognitive

Level: Understand

Client Needs: Physiological Integrity: Pharmacological Therapies Integrated

Process: Clinical Problem-solving Process (Nursing Process) Reference: p. 7, Orphan Drug Program

28. After teaching a group of nursing students about pharmacokinetics, the instructor determines that the teaching was successful when the students identify which actions as a phase? Select all that apply.
- A) Absorption
  - B) Distribution
  - C) Administration
  - D) Metabolism
  - E) Excretion

Answer: A, B, D, E