1. A woman has been prescribed paroxetine hydrochloride, which is an antidepressant agent administered in pill form. The medication is administered for her obsessive-compulsive disorder. This medication will produce which of the following effects?
   A) Curative
   B) Systemic
   C) Local
   D) Parenteral
   Ans: B
   Feedback:
   Drugs that produce systemic effects are taken into the body, circulated through the bloodstream to their sites of action in various body tissues, and eventually eliminated from the body. Curative agents are given to cure a disease process. In this case, paroxetine hydrochloride will control the symptoms but not cure the disorder. Drugs with local effects, such as sunscreen and local anesthetics, act mainly at the site of application. Paroxetine hydrochloride is not administered parenterally. Parenteral agents are administered subcutaneously, intramuscularly, or intravenously.

2. A patient has been prescribed an antibiotic. This medication is a naturally occurring substance that has been chemically modified. What is another name for this type of medication?
   A) Synthetic drug
   B) Semisynthetic drug
   C) Biotechnology drug
   D) Prototype drug
   Ans: B
   Feedback:
   Semisynthetic drugs (e.g., many antibiotics) are naturally occurring substances that have been chemically modified. Synthetic drugs are more standardized in their chemical characteristics, more consistent in their effects, and less likely to produce allergic reactions. Biotechnology drugs involve manipulating DNA and RNA and recombining genes into hybrid molecules that can be inserted into living organisms. Prototype drugs are the first drug of a particular group to be developed.

3. A patient is administered morphine. Morphine is a prototypical drug that can be classified in different ways. Which of the following classifications applies to morphine?
   A) Central nervous system depressant
   B) Central nervous system stimulant
   C) Anti-inflammatory
   D) Antihypertensive
   Ans: A
   Feedback:
   Drugs are classified according to their effects on particular body systems, their therapeutic uses, and their chemical characteristics. For example, morphine can be classified as a central nervous system depressant and a narcotic or opioid analgesic. A central nervous system stimulant increases attention and raises mood. An anti-inflammatory agent decreases inflammation at the site of tissue or joint inflammation. An antihypertensive agent reduces blood pressure.

4. A patient is administered amoxicillin (Amoxil). The generic name of this medication indicates that it belongs to which drug group?
   A) Selective serotonin reuptake inhibitors
   B) Diuretics
   C) Penicillins
   D) ACE inhibitors
   Ans: C
   Feedback:
   The generic name often indicates the drug group (e.g., drugs with generic names ending in "cillin" are penicillins). Selective serotonin reuptake inhibitors are medications that have antidepressant effects; SSRI is a broad classification, not a generic name. Diuretics are medications that increase urine output; diuretic is a broad classification, not a generic name. ACE inhibitor is the broad classification for the angiotensin-converting enzyme inhibitors, not the generic name.

5. The administration of diphenhydramine (Benadryl), which is an over-the-counter medication, is regulated by which government agency?
   A) Public Health Service
   B) Federal Trade Commission
   C) Occupational Safety and Health Administration
   D) Food and Drug Administration
   Ans: D
   Feedback:
   The Food and Drug Administration approves drugs for over-the-counter availability, including the transfer of drugs from prescription to OTC status, and may require clinical trials to determine the safety and effectiveness of OTC use. The Public Health Service is regulated by the state to maintain the health of individual citizens of the state. The Federal Trade Commission regulates imports and exports throughout the nation. The Occupational Safety and Health Administration regulates safety within the workplace.

6. The administration of anabolic steroids is regulated by which of the following laws?
   A) The Food, Drug, and Cosmetic Act of 1938
   B) The Comprehensive Drug Abuse Prevention and Control Act
   C) The Harrison Narcotic Act
   D) The Shirley Amendment
   Ans: B
   Feedback:
   The Comprehensive Drug Abuse Prevention and Control Act regulates the manufacture and distribution of narcotics, stimulants, depressants, hallucinogens, and anabolic steroids. The Food, Drug, and Cosmetic Act of 1938 revised and broadened FDA powers and responsibilities, giving the FDA control over drug safety. The Harrison Narcotic Act restricted the importation, manufacture, sale, and use of opium, cocaine, marijuana, and other drugs that the act defined as narcotics. The Shirley Amendment of 1912 prohibited fraudulent claims of drug effectiveness.

7. A nurse is responsible for maintaining an accurate count and record of the controlled substances on the nursing unit. This nursing action is regulated by which of the following laws or agencies?
   A) Food, Drug, and Cosmetic Act of 1938
   B) Public Health Service
   C) Drug Enforcement Administration
   D) Shirley Amendment
   Ans: C
   Feedback:
   The Drug Enforcement Administration enforces the Controlled Substances Act. Under this enforcement, nurses are responsible for storing controlled substances in locked containers, administering them only to the people for whom they are prescribed, recording each dose given, and maintaining an accurate inventory. The Food, Drug, and Cosmetic Act of 1938 revised and broadened FDA powers and responsibilities, giving the FDA control over drug safety. The Public Health Service is regulated by the state to maintain the health of individual citizens of the state. The Shirley Amendment of 1912 prohibited fraudulent claims of drug effectiveness.

8. In Phase I clinical trials, the potential uses and effects of a new drug are determined by which of the following methods?
   A) Administering doses to healthy volunteers
   B) Administering doses to people with the disease
   C) Administering in placebo-controlled design
   D) Calculating the risk-to-benefit ratio
   Ans: A
   Feedback:
   Phase I studies allow for the administration of the medication to healthy volunteers to determine safe dosages, routes of administration, absorption, metabolism, excretion, and toxicity. In Phase II studies, a few doses are given to a certain number of subjects with the disease or symptom for which the drug is being studied and responses are compared with those of healthy subjects. Placebo-controlled designs are used in the Phase III studies, in which half of the subjects receive the new drug and half receive the placebo. Calculating the risk-to-benefit ratio is used in Phase II studies to determine whether the potential benefits of the drug outweigh the risks.

9. A new medication for the treatment of Alzheimer's disease is being administered to a group of subjects with the disease. The subjects receiving this medication are unaware of whether they are being administered the medication or whether they are receiving a placebo. This testing occurs in which phase of the drug approval process?
   A) Phase I
   B) Phase II
   C) Phase III
   D) Phase IV
   Ans: C
   Feedback:
   In Phase III, the drug is given to a larger and more representative group of subjects. In double-blind, placebo-controlled designs, half of the subjects receive the new drug and half receive a placebo (an inactive substance similar in appearance to the actual drug), with neither subjects nor researchers knowing which subjects receive which formulation. In Phase I, a few doses are given to a certain number of healthy volunteers to determine safe dosages, routes of administration, absorption, metabolism, excretion, and toxicity. In Phase II, a few doses are given to a certain number of subjects with the disease or symptom for which the drug is being studied and responses are compared with those of healthy subjects. In Phase IV, the FDA evaluates the data from the first three phases for drug safety and effectiveness, allows the drug to be marketed for general use, and requires manufacturers to continue monitoring the drug's effects.

10. Which organization is responsible for approving new drugs in the United States?
   A) American Medical Association
   B) American Pharmaceutical Association
   C) Food and Drug Administration
   D) United States Pharmacopeia
   Ans: C
   Feedback:
   The Food and Drug Administration is responsible for approving new drugs in the United States. The American Medical Association represents the physicians of the United States. The American Pharmaceutical Association represents the pharmacists of the United States. The United States Pharmacopeia was adopted in 1906 and is issued every 5 years under the supervision of a national committee of pharmacists, scientists, and physicians.

11. Which of the following reference books provides information from the drug manufacturers' inserts?
    A) *American Formulary Service*
    B) *Drug Facts and Comparisons*
    C) *Physicians' Desk Reference*
    D) *Lippincott's Nursing Drug Guide*
    Ans: C
    Feedback:
    The *Physicians' Desk Reference* is published yearly and contains manufacturers' published inserts for selected drugs. *American Formulary Service* is an authoritative source of drug information. *Drug Facts and Comparisons* is an authoritative source of drug information. *Lippincott's Nursing Drug Guide* is an example of a drug handbook, not a compilation of manufacturers' inserts.

12. A nursing student in a pharmacology class should be encouraged to study the medications according to which categorization?
    A) Prototype
    B) Controlled substance
    C) Drug use
    D) Generic names
    Ans: A
    Feedback:
    The nursing student should concentrate on therapeutic classifications and their prototypes. Controlled substances limit the medications studied to one broad classification. Drug use is only one part of the broad classification. Generic names are only one aspect of the medication.

13. A patient with a long-standing dermatological health problem has been advised to use a drug with a local effect. The nurse should recognize what characteristic of this drug?
    A) It affects only the organ system in which it is metabolized.
    B) The drug requires application at multiple sites.
    C) It is effective only as long as it is in contact with skin.
    D) The drug acts primarily at the site where it is applied.
    Ans: D
    Feedback:
    Drugs with local effects, such as sunscreen lotions and local anesthetics, act mainly at the site of application. Those with systemic effects are taken into the body, circulated through the bloodstream to their sites of action in various body tissues, and eventually eliminated from the body. A drug with local effect does not necessarily have to be applied at multiple sites, and its action may affect tissues long after contact.

14. A patient with an autoimmune disorder has just been prescribed a synthetic drug. Which of the following characteristics is a noted advantage of synthetic drugs?
    A) Synthetic drugs are less likely to cause an allergic reaction than naturally occurring substances.
    B) Synthetic drugs typically require less frequent dosing than naturally occurring substances.
    C) Synthetic drugs are normally available on an over-the-counter basis.
    D) Synthetic drugs are available in a wider variety of administration routes than naturally occurring substances.

    Ans: A

    Feedback:

    Synthetic drugs are more standardized in their chemical characteristics, more consistent in their effects, and less likely to produce allergic reactions. They do not necessarily require less frequent dosing and may or may not be available OTC. They are not noted to be available in a wider variety of administration routes than naturally occurring substances.

15. A patient is confused about her care provider's advice and has stated to the nurse, "I wasn't sure whether he recommended Tylenol or whether he recommended acetaminophen." The nurse should include which of the following information in an explanation of generic and trade names?
    A) Prescribers should refer solely to generic names in their recommendations and written prescriptions.
    B) A generic name is independent of any particular drug manufacturer.
    C) Generic names change frequently, but trade names are more consistent.
    D) Prescribers should refer solely to trade names in their recommendations and written prescriptions.

    Ans: B

    Feedback:

    A generic name is related to the chemical or official name and is independent of the manufacturer. Drugs may be prescribed and dispensed by generic or trade name. Generic names do not change, while trade names vary according to time and place.

16. A nurse is aware that American drug laws have a long and complex history, with numerous jurisdictions being involved. What is the primary purpose of drug laws in the United States?
    A) To ensure maximum choice for consumers
    B) To expedite the workload of care providers
    C) To protect the safety of the public
    D) To enhance the efficient delivery of health care
    Ans: C
    Feedback:
    The main goal of drugs laws is to protect the public by ensuring that drugs marketed for therapeutic purposes are safe and effective. Efficiency and choice are valid considerations but neither is the primary goal of American drug legislation.

17. A nurse who provides care on a postsurgical unit frequently administers Schedule II drugs to patients. Which of the following aspects of administering these drugs falls under the auspices of the Drug Enforcement Agency?
    A) Performing a thorough patient assessment prior to administration
    B) Recording each dose administration on an agency narcotic sheet
    C) Informing patients of the potential risks and benefits of Schedule II drugs prior to the first dose
    D) Assessing the patient shortly after administration to ensure therapeutic effect
    Ans: B
    Feedback:
    Nurses are responsible for storing controlled substances in locked containers, administering them only to people for whom they are prescribed, recording each dose given on agency narcotic sheets and on the patient's medication administration record, maintaining an accurate inventory, and reporting discrepancies to the proper authorities. The other given actions are appropriate nursing activities, but they are not within the scope of the DEA authority.

18. Trials of a new drug are scheduled to soon begin and the testing methodology will integrate the stipulations of the National Institutes of Health (NIH) Revitalization Act. According to this act, the manufacturer must
    A) independently fund the entire testing process.
    B) make the results of the testing process publicly available.
    C) include women and minorities in the testing process.
    D) exclude any potential for financial gain during the testing process.
    Ans: C
    Feedback:
    In 1993, Congress passed the National Institutes of Health (NIH) Revitalization Act, which formalized a policy of the NIH that women and minorities be included in human subject research studies funded by the NIH and that women and minorities be included in clinical drug trials. This act does not specifically address the financial structure of testing or the accessibility of information.

19. A hospital nurse is vigilant in ensuring the safe use of medications and consistently applies the rights of medication administration. Which of the following is one of the traditional rights of medication administration?
    A) Right to refuse
    B) Right route
    C) Right education
    D) Right evaluation
    Ans: B
    Feedback:
    The traditional rights of medication administration (right drug, right dose, right patient, right route, right time, right reason, and right documentation) now include additional rights that should also be considered (right education, right evaluation, and right to refuse the medication).

20. A patient's current medication administration record includes a drug that the nurse recognizes as an Institute for Safe Medication Practices (ISMP) high-alert medication. This designation signals the nurse to what characteristic of the drug?
    A) It can only be administered by a physician or advanced practice nurse.
    B) Administration must be cosigned by a second registered nurse or practical/vocational nurse.
    C) It is currently undergoing Phase IV testing and is pending full FDA approval.
    D) Administration errors carry a heightened risk of causing significant patient harm.
    Ans: D
    Feedback:
    The Institute for Safe Medication Practices (ISMP) identifies drugs that when used in error have a heightened risk of causing significant patient harm. Such drugs are not limited to physician or advanced practice nurse administration. The drug would have completed the testing and approval procedure and administration does not necessarily require a cosignature.