Chapter 1. The Role of the Nurse Practitioner

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. Nurse practitioner prescriptive authority is regulated by:
1. The National Council of State Boards of Nursing
2. The U.S. Drug Enforcement Administration
3. The State Board of Nursing for each state
4. The State Board of Pharmacy

____ 2. The benefits to the patient of having an advanced practice registered nurse (APRN) prescriber include:
1. Nurses know more about pharmacology than other prescribers because they take it both in their basic nursing program and in their APRN program.
2. Nurses care for the patient from a holistic approach and include the patient in decision making regarding their care.
3. APRNs are less likely to prescribe narcotics and other controlled substances.
4. APRNs are able to prescribe independently in all states, whereas a physician's assistant needs to have a physician supervising their practice.

____ 3. Clinical judgment in prescribing includes:
1. Factoring in the cost to the patient of the medication prescribed
2. Always prescribing the newest medication available for the disease process
3. Handing out drug samples to poor patients
4. Prescribing all generic medications to cut costs

____ 4. Process for choosing an effective drug for a disorder include:
1. Asking the patient what drug they think would work best for them
2. Consulting nationally recognized guidelines for disease management
3. Prescribing medications that are available as samples before writing a prescription
4. Following U.S. Drug Enforcement Administration guidelines for prescribing

____ 5. Nonintentional nonadherence of drug therapy may occur due to:
1. Belief that medication does not work
2. Adverse drug reactions
3. Chronic conditions that require daily therapy
4. Forgetfulness or distraction

Chapter 1. The Role of the Nurse Practitioner
Answer Section

MULTIPLE CHOICE

1. ANS: 3 PTS: 1
2. ANS: 2 PTS: 1
3. ANS: 1 PTS: 1
4. ANS: 2 PTS: 1
5. ANS: 4 PTS: 1

Chapter 2. Review of Basic Principles of Pharmacology

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. A patient's nutritional intake and laboratory results reflect hypoalbuminemia. This is critical to prescribing because:
   1. Distribution of drugs to target tissue may be affected.
   2. The solubility of the drug will not match the site of absorption.
   3. There will be less free drug available to generate an effect.
   4. Drugs bound to albumin are readily excreted by the kidneys.

____ 2. Drugs that have a significant first-pass effect:
   1. Must be given by the enteral (oral) route only
   2. Bypass the hepatic circulation
   3. Are rapidly metabolized by the liver and may have little, if any, desired action
   4. Are converted by the liver to more active and fat-soluble forms

____ 3. The route of excretion of a volatile drug will likely be the:
   1. Kidneys
   2. Lungs
   3. Bile and feces
   4. Skin

____ 4. Medroxyprogesterone (Depo-Provera) is prescribed intramuscularly (IM) to create a storage reservoir of the drug. Storage reservoirs:
   1. Assure that the drug will reach its intended target tissue
   2. Are the reason for giving loading doses
   3. Increase the length of time a drug is available and active
   4. Are most common in collagen tissues

____ 5. The nurse practitioner (NP) chooses to give cephalexin every 8 hours based on knowledge of the drug's:
   1. Propensity to go to the target receptor
   2. Biological half-life
   3. Pharmacodynamics
   4. Safety and side effects

____ 6. Azithromycin dosing requires that the first day's dosage is twice that of the other 4 days of the prescription. This is considered a loading dose. A loading dose:
   1. Rapidly achieves drug levels in the therapeutic range
   2. Requires four to five half-lives to attain
   3. Is influenced by renal function
   4. Is directly related to the drug circulating to the target tissues

____ 7. The point in time on the drug concentration curve that indicates the first sign of a therapeutic effect is the:
   1. Minimum adverse effect level
   2. Peak of action
   3. Onset of action
   4. Therapeutic range

____ 8. Phenytoin requires that a trough level be drawn. Peak and trough levels are done:
   1. When the drug has a wide therapeutic range
   2. When the drug will be administered for a short time only
   3. When there is a high correlation between the dose and saturation of receptor sites
   4. To determine if a drug is in the therapeutic range

____ 9. A laboratory result indicates that the peak level for a drug is above the minimum toxic concentration. This means that the:
   1. Concentration will produce therapeutic effects
   2. Concentration will produce an adverse response
   3. Time between doses must be shortened
   4. Duration of action of the drug is too long

____ 10. Drugs that are receptor agonists may demonstrate what property?
   1. Irreversible binding to the drug receptor site
   2. Up-regulation with chronic use
   3. Desensitization or down-regulation with continuous use
   4. Inverse relationship between drug concentration and drug action

____ 11. Drugs that are receptor antagonists, such as beta blockers, may cause:
   1. Down-regulation of the drug receptor
   2. An exaggerated response if abruptly discontinued
   3. Partial blockade of the effects of agonist drugs
   4. An exaggerated response to competitive drug agonists

____ 12. Factors that affect gastric drug absorption include:
   1. Liver enzyme activity
   2. Protein-binding properties of the drug molecule
   3. Lipid solubility of the drug
   4. Ability to chew and swallow

____ 13. Drugs administered via IV:
   1. Need to be lipid soluble in order to be easily absorbed
   2. Begin distribution into the body immediately

3. Are easily absorbed if they are nonionized
4. May use pinocytosis to be absorbed

____ 14. When a medication is added to a regimen for a synergistic effect, the combined effect of the drugs is:
1. The sum of the effects of each drug individually
2. Greater than the sum of the effects of each drug individually
3. Less than the effect of each drug individually
4. Not predictable, as it varies with each individual

____ 15. Which of the following statements about bioavailability is true?
1. Bioavailability issues are especially important for drugs with narrow therapeutic ranges or sustained-release mechanisms.
2. All brands of a drug have the same bioavailability.
3. Drugs that are administered more than once a day have greater bioavailability than drugs given once daily.
4. Combining an active drug with an inert substance does not affect bioavailability.

____ 16. Which of the following statements about the major distribution barriers (blood-brain or fetal-placental) is true?
1. Water soluble and ionized drugs cross these barriers rapidly.
2. The blood-brain barrier slows the passage of many drugs into and out of brain cells.
3. The fetal-placental barrier protects the fetus from drugs taken by the mother.
4. Lipid-soluble drugs do not pass these barriers and are safe for pregnant women.

____ 17. Drugs are metabolized mainly by the liver via phase I or phase II reactions. The purpose of both of these types of reactions is to:
1. Inactivate prodrugs before they can be activated by target tissues
2. Change the drugs so they can cross plasma membranes
3. Change drug molecules to a form that an excretory organ can excrete
4. Make these drugs more ionized and polar to facilitate excretion

____ 18. Once they have been metabolized by the liver, the metabolites may be:
1. More active than the parent drug
2. Less active than the parent drug
3. Totally “deactivated” so they are excreted without any effect
4. All of the above

____ 19. All drugs continue to act in the body until they are changed or excreted. The ability of the body to excrete drugs via the renal system would be increased by:
1. Reduced circulation and perfusion of the kidney
2. Chronic renal disease
3. Competition for a transport site by another drug
4. Unbinding a nonvolatile drug from plasma proteins

____ 20. Steady state is:
1. The point on the drug concentration curve when absorption exceeds excretion
2. When the amount of drug in the body remains constant

3. When the amount of drug in the body stays below the minimum toxic concentration
4. All of the above

____ 21. Two different pain medications are given together for pain relief. The drug–drug interaction is:
1. Synergistic
2. Antagonistic
3. Potentiative
4. Additive

____ 22. Actions taken to reduce drug–drug interaction problems include all of the following EXCEPT:
1. Reducing the dosage of one of the drugs
2. Scheduling their administration at different times
3. Prescribing a third drug to counteract the adverse reaction of the combination
4. Reducing the dosage of both drugs

____ 23. The time required for the amount of drug in the body to decrease by 50% is called:
1. Steady state
2. Half-life
3. Phase II metabolism
4. Reduced bioavailability time

____ 24. An agonist activates a receptor and stimulates a response. When given frequently over time, the body may:
1. Up-regulate the total number of receptors
2. Block the receptor with a partial agonist
3. Alter the drug's metabolism
4. Down-regulate the numbers of that specific receptor

____ 25. Drug antagonism is best defined as an effect of a drug that:
1. Leads to major physiological and psychological dependence
2. Is modified by the concurrent administration of another drug
3. Cannot be metabolized before another dose is administered
4. Leads to a decreased physiological response when combined with another drug

____ 26. Instructions to a client regarding self-administration of oral enteric-coated tablets should include which of the following statements?
1. "Avoid any other oral medicines while taking this drug."
2. "If swallowing this tablet is difficult, dissolve it in 3 ounces of orange juice."
3. "The tablet may be crushed if you have any difficulty taking it."
4. "To achieve best effect, take the tablet with at least 8 ounces of fluid."

____ 27. The major reason for not crushing a sustained-release capsule is that, if crushed, the coated beads of the drugs could possibly:
1. Disintegrate
2. Become toxic
3. Not be absorbed properly
4. Deteriorate

____ 28. Which of the following substances is the most likely to be absorbed in the intestines rather than in the stomach?
1. Sodium bicarbonate
2. Ascorbic acid
3. Salicylic acid
4. Glucose

____ 29. Which of the following variables is a factor in drug absorption?
1. The smaller the surface area for absorption, the more rapidly the drug is absorbed.
2. A rich blood supply to the area of absorption leads to better absorption.
3. The less soluble the drug, the more easily it is absorbed.
4. Ionized drugs are easily absorbed across the cell membrane.

____ 30. An advantage of prescribing a sublingual medication is that the medication is:
1. Absorbed rapidly
2. Excreted rapidly
3. Metabolized minimally
4. Distributed equally

____ 31. Drugs that use CYP 3A4 isoenzymes for metabolism may:
1. Induce the metabolism of another drug
2. Inhibit the metabolism of another drug
3. Both 1 and 2
4. Neither 1 nor 2

____ 32. Therapeutic drug levels are drawn when a drug reaches steady state. Drugs reach steady state:
1. After the second dose
2. After four to five half-lives
3. When the patient feels the full effect of the drug
4. One hour after IV administration

Chapter 2. Review of Basic Principles of Pharmacology
Answer Section

MULTIPLE CHOICE

1. ANS: 1 PTS: 1
2. ANS: 3 PTS: 1
3. ANS: 2 PTS: 1
4. ANS: 3 PTS: 1
5. ANS: 2 PTS: 1
6. ANS: 1 PTS: 1
7. ANS: 3 PTS: 1
8. ANS: 4 PTS: 1
9. ANS: 2 PTS: 1
10. ANS: 3 PTS: 1
11. ANS: 2 PTS: 1
12. ANS: 3 PTS: 1
13. ANS: 2 PTS: 1
14. ANS: 2 PTS: 1
15. ANS: 1 PTS: 1
16. ANS: 2 PTS: 1
17. ANS: 3 PTS: 1
18. ANS: 4 PTS: 1
19. ANS: 4 PTS: 1
20. ANS: 2 PTS: 1
21. ANS: 4 PTS: 1
22. ANS: 3 PTS: 1
23. ANS: 2 PTS: 1
24. ANS: 4 PTS: 1
25. ANS: 2 PTS: 1
26. ANS: 4 PTS: 1
27. ANS: 2 PTS: 1
28. ANS: 1 PTS: 1
29. ANS: 2 PTS: 1
30. ANS: 1 PTS: 1
31. ANS: 3 PTS: 1
32. ANS: 2 PTS: 1

Chapter 3. Rational Drug Selection

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. An NP would prescribe the liquid form of ibuprofen for a 6-year-old child because:
   1. Drugs given in liquid form are less irritating to the stomach.
   2. A 6-year-old child may have problems swallowing a pill.
   3. Liquid forms of medication eliminate the concern for first-pass effect.

4. Liquid ibuprofen does not have to be dosed as often as the tablet form.

____ 2. In deciding which drug to use to treat a condition, the NP chooses to prescribe Drug A because it:
1. Has serious side effects and it is not being used for a life-threatening condition
2. Will be taken twice daily and will be taken at home
3. Is expensive, but covered by health insurance
4. None of these are important in choosing a drug

____ 3. A client asks the NP about the differences in drug effects between men and women. What is known about the differences between the pharmacokinetics of men and women?
1. Body temperature varies between men and women.
2. Muscle mass is greater in women.
3. Percentage of fat differs between genders.
4. Proven subjective factors exist between the genders.

____ 4. The first step in the prescribing process according to the World Health Organization is:
1. Choosing the treatment
2. Educating the patient about the medication
3. Diagnosing the patient's problem
4. Starting the treatment

____ 5. Treatment goals in prescribing should:
1. Always be curative
2. Be patient centered
3. Be convenient for the provider
4. Focus on the cost of therapy

____ 6. The therapeutic goals when prescribing include(s):
1. Curative
2. Palliative
3. Preventive
4. All of the above

____ 7. When determining drug treatment the NP prescriber should:
1. Always use evidence-based guidelines
2. Individualize the drug choice for the specific patient
3. Rely on his or her experience when prescribing for complex patients
4. Use the newest drug on the market for the condition being treated

____ 8. Patient education regarding prescribed medication includes:
1. Instructions written at the high school reading level
2. Discussion of expected adverse drug reactions
3. How to store leftover medication such as antibiotics
4. Verbal instructions that are always in English

____ 9. Passive monitoring of drug effectiveness includes:
1. Ordering therapeutic drug levels
2. Adding or subtracting medications from the treatment regimen
3. Ongoing provider visits

4. Instructing the patient to report if the drug is not effective

____ 10. Pharmacokinetic factors that affect prescribing include:
1. Therapeutic index
2. Minimum effective concentration
3. Bioavailability
4. Ease of titration

____ 11. Pharmaceutical promotion may affect prescribing. To address the impact of pharmaceutical promotion, the following recommendations have been made by the Institute of Medicine:
1. Conflicts of interest and financial relationships should be disclosed by those providing education.
2. Providers should ban all pharmaceutical representatives from their office setting.
3. Drug samples should be used for patients who have the insurance to pay for them, to ensure the patient can afford the medication.
4. Providers should only accept low-value gifts, such as pens and pads of paper, from the pharmaceutical representative.

____ 12. Under new U.S. Food and Drug Administration labeling, pregnancy categories have been:
1. Strengthened with a new coding such as C+ or C- to discern when a drug is more or less toxic to the fetus
2. Changed to incorporate a pregnancy risk summary and clinical considerations on the drug label
3. Eliminated, and replaced with a link to the National Library of Medicine TOXNET Web site for in-depth information regarding pregnancy concerns
4. Clarified to include information such as safe dosages in each trimester of pregnancy

Chapter 3. Rational Drug Selection
Answer Section

MULTIPLE CHOICE

1. ANS: 2 PTS: 1
2. ANS: 2 PTS: 1
3. ANS: 3 PTS: 1
4. ANS: 3 PTS: 1
5. ANS: 2 PTS: 1
6. ANS: 4 PTS: 1
7. ANS: 2 PTS: 1
8. ANS: 2 PTS: 1
9. ANS: 4 PTS: 1
10. ANS: 3 PTS: 1
11. ANS: 1 PTS: 1
12. ANS: 2 PTS: 1

Chapter 4. Legal and Professional Issues in Prescribing

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. The U.S. Food and Drug Administration regulates:
   1. Prescribing of drugs by medical doctors (MDs) and nurse practitioners (NPs)
   2. The official labeling for all prescription and over-the-counter drugs
   3. Off-label recommendations for prescribing
   4. Pharmaceutical educational offerings

____ 2. U.S. Food and Drug Administration approval is required for:
   1. Medical devices, including artificial joints
   2. Over-the-counter vitamins
   3. Herbal products, such as St. John's Wort
   4. Dietary supplements, such as Ensure

____ 3. An investigational new drug is filed with the U.S. Food and Drug Administration:
   1. When the manufacturer has completed phase III trials
   2. When a new drug is discovered
   3. Prior to animal testing of any new drug entity
   4. Prior to human testing of any new drug entity

____ 4. Phase IV clinical trials in the United States are also known as:
   1. Human bioavailability trials
   2. Postmarketing research
   3. Human safety and efficacy studies
   4. The last stage of animal trials before the human trials begin

____ 5. Off-label prescribing is: