# SAUNDERS Q&A REVIEW FOR THE NCLEX-RN® EXAMINATION

8 EDITION

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UNIT I

# NCLEX-RN® Preparation

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CHAPTER 1

# Clinical Judgment and the NCLEX-RN® Examination

## The Pyramid to Success

Welcome to *Saunders Q&A Review for the NCLEX-RN® Examination*, the second component of the Pyramid to Success! At this time, you have completed your first path toward the peak of the pyramid with *Saunders Comprehensive Review for the NCLEX-RN® Examination*. Now it is time to continue that journey to become a registered nurse with *Saunders Q&A Review for the NCLEX-RN® Examination*.

As you begin your journey through this book, you will be introduced to all of the important points regarding the NCLEX-RN examination and the process of testing, and to the unique and special tips regarding how to prepare yourself both academically and nonacademically for this important examination. You will read what a nursing graduate who recently passed the NCLEX-RN examination has to say about the test. Important test-taking strategies are detailed, which will guide you in selecting the correct option or assist you in making an educated guess to arrive at an answer.

### About This Resource

*Saunders Q&A Review for the NCLEX-RN® Examination* contains more than 6000 NCLEX-style practice questions. Question types include multiple choice; multiple response (select all that apply [SATA]); fill in the blank; prioritizing (ordered response), also known as drag and drop; image ("hot spot") questions; chart/exhibit questions; graphic options; testlets (case studies); and audio questions. The Evolve site also includes audios for review on test-taking strategies for pharmacology, fluids and electrolytes, and acid-base balance. Next Generation NCLEX® (NGN)-style questions are also included on the Evolve site. The chapters in the book have been developed to provide a description of the components of the NCLEX-RN test plan, including Client Needs and the Integrated Processes. In addition, chapters have been prepared to contain practice questions specific to each category of Client Needs and the Integrated Processes.

A rationale, priority nursing tip, test-taking strategy, and reference source containing a page number are provided with each question. Each question is coded on the basis of the Level of Cognitive Ability, Client Needs category, Integrated Process, Content Area being tested, Health Problem if applicable, and the Cognitive Skills/Processes of the National Council of State Boards of Nursing (NCSBN) Clinical Judgment Measurement Model (NCJMM). In addition, two Priority Concepts that relate to the content of the question are identified. This code is helpful specifically for students whose curriculum is concept-based. The rationale contains significant information regarding both the correct and incorrect options. The priority nursing tip provides you with key information about a nursing point to remember. The test-taking strategy maps out a logical path for selecting the correct option, if necessary. The reference source and page number provide easy access to the information that you need to review.

### Other Resources in the Saunders Pyramid to Success

There are several other resources in the Saunders Pyramid to Success program. These include the following: *The Saunders Comprehensive Review for the NCLEX-RN® Examination, The HESI/Saunders Online Review for the NCLEX-RN® Examination, Saunders Strategies for Test Success: Passing Nursing School and the NCLEX® Exam, Saunders Q&A Review Cards for the NCLEX-RN® Exam*, and *Saunders RNtertainment for the NCLEX-RN® Examination Review Game.*

All of these resources in the Saunders Pyramid to Success are described in the preface of this book and can be obtained online by visiting http://elsevierhealth.com or by calling 1-800-545-2522.

Let's begin our journey through the Pyramid to Success.

### Clinical Judgment

Clinical judgment is the observed outcome of critical thinking and decision-making (Dickison, Haerling, & Lasater, 2019). There is heightened attention being paid to clinical judgment, as a means of teaching, learning, and testing. The NCLEX-RN® examination requires candidates to demonstrate the ability to use clinical judgment in client care. Clinical judgment should also be used as a test-taking strategy to answer test questions. The National Council of State Boards of Nursing (NCSBN) has created a Clinical Judgment Measurement Model (NCJMM). It consists of applying 6 cognitive skills or processes: (1) recognizing cues; (2) analyzing cues; (3) prioritizing hypotheses; (4) generating solutions; (5) taking action; and (6) evaluating outcomes (Dickison, et al., 2019). Box 1-1 provides a description of these six cognitive skills/processes. This model also serves as a guide for the NCSBN to create NGN® questions. The model continues to evolve as do the NGN® item types. It is expected that the NGN® test items will be scored items in the new test plan implemented in 2023. Some of these NGN® item types can be found on the Evolve site accompanying this book. We highly encourage you to frequently access the NCSBN website at http://www.ncsbn.org for updates.

## The Examination Process

An important step in the Pyramid to Success is to become as familiar as possible with the examination process. Candidates

**BOX 1-1 Cognitive Skills/Processes and Descriptions**

Recognize cues – Identifying significant data from many sources (assessment)
Analyze cues – Connecting data to the client's clinical presentation – is the data expected? Unexpected? What are the concerns? (analysis)
Prioritize hypotheses – Ranking hypotheses; concerns, client needs (analysis, diagnosis)
Generate solutions – Using hypotheses to determine interventions for an expected outcome (planning)
Take actions - Implementing the generated solutions addressing the highest priorities or hypotheses (implementation)
Evaluate outcomes – Comparing observed outcomes with expected ones (evaluation)

Reference: Dickison P, Haerling KA, Lasater K (2019). Integrating the National Council of State Boards of Nursing Clinical Judgment Model into nursing educational frameworks. *Journal of Nursing Education*, 58(2), 72-78.

facing the challenge of this examination can experience significant anxiety. Knowing what the examination is all about and knowing what you will encounter during the process of testing will assist in alleviating fear and anxiety. The information contained in this chapter was obtained from the National Council of State Boards of Nursing (NCSBN) Web site (http://www.ncsbn.org) and from the NCSBN 2019 test plan for the NCLEX-RN® and includes some procedures related to registering for the examination, testing procedures, and the answers to the questions most commonly asked by nursing students and graduates preparing to take the NCLEX®. You can obtain additional information regarding the test and its development by accessing the NCSBN Web site and clicking on the NCLEX® & Other Exams tab or by writing to the National Council of State Boards of Nursing, 111 East Wacker Drive, Suite 2900, Chicago, IL 60601. You are encouraged to access the NCSBN Web site because this site provides you with valuable information about the NCLEX, the test plan, and other resources available to an NCLEX® candidate, such as the NCLEX® Candidate Bulletin.

## Computer Adaptive Testing

The acronym *CAT* stands for computerized adaptive test, which means that the examination is created as the test-taker answers each question. All the test questions are categorized on the basis of the test plan structure and the level of difficulty of the question. As you answer a question, the computer determines your competency based on the answer you selected. If you selected a correct answer, the computer scans the question bank and selects a more difficult question. If you selected an incorrect answer, the computer scans the question bank and selects an easier question. This process continues until all test plan requirements are met and a reliable pass-or-fail decision is made.

When taking a CAT, once an answer is recorded, all subsequent questions administered depend, to an extent, on the answer selected for that question. Skipping and returning to earlier questions are not compatible with the logical methodology of a CAT. The inability to skip questions or go back to change previous answers will not be a disadvantage to you; you will not fall into that "trap" of changing a correct answer to an incorrect one with the CAT system.

If you are faced with a question that contains unfamiliar content, you may need to guess at the answer. Although guessing is discouraged when taking any examination, there is no penalty for guessing on the NCLEX®. Remember, in almost all of the questions, the answer will be right there in front of you. If you need to guess, use your nursing knowledge, clinical experiences, and clinical judgment skills to their fullest extent and all of the test-taking strategies you have practiced in this review program. Refer to Chapter 4 for information on clinical judgment and test-taking strategies.

You do not need any computer experience to take this examination. A keyboard tutorial is provided and administered to all test-takers at the start of the examination. The tutorial provides instructions on the use of the on-screen optional calculator, the use of the mouse, and how to record an answer. The tutorial provides instructions on how to respond to all question types on this examination. This tutorial is on the NCSBN Web site, and you are encouraged to view the tutorial when you are preparing for the NCLEX® examination. In addition, at the testing site, a test administrator is present to assist in explaining the use of the computer to ensure your full understanding of how to proceed.

## Development of the Test Plan

The test plan for the NCLEX-RN® examination is developed by the NCSBN. The examination is a national examination; the NCSBN considers the legal scope of nursing practice as governed by state laws and regulations, including the Nurse Practice Act, and uses these laws to define the areas on the examination that will assess the competence of the test-taker for licensure.

The NCSBN also conducts an important study every 3 years, known as a practice analysis study, to determine the framework for the test plan for the examination. The participants in this study include newly licensed registered nurses from all types of basic nursing education programs. From a list of nursing care activities provided, the participants are asked about the frequency and importance of performing them in relation to client safety and the setting in which they are performed. A panel of content experts at the NCSBN analyzes the results of the study and makes decisions regarding the test plan framework. The results of this recently conducted study provided the structure for the test plan implemented in April 2019.

## The Test Plan

The content of the NCLEX-RN® examination reflects the activities identified in the practice analysis study conducted by the NCSBN. The questions are written to address Level of Cognitive Ability, Client Needs, and Integrated Processes as identified in the test plan developed by the NCSBN.

### Level of Cognitive Ability

Levels of cognitive ability include remembering, understanding, applying, analyzing, evaluating, and creating (synthesizing).

**TABLE 1-1 Levels of Cognitive Ability: Descriptions and Examples**

| Level | Description and Example |
|---|---|
| Remembering | Recalling information from memorizing<br>Example: A normal blood glucose level is 70-99 mg/dL (3.9-5.5 mmol/L). |
| Understanding | Recognizing the meaning of information<br>Example: A blood glucose level of 60 mg/dL (3.34 mmol/L) is lower than the normal reference range. |
| Applying | Carrying out an appropriate action based on information<br>Example: Administering 10-15 g of carbohydrate such as a ½ glass of fruit juice to treat mild hypoglycemia |
| Analyzing | Examining a broad concept and breaking it down into smaller parts<br>Example: The broad concept is mild hypoglycemia and the smaller concepts are the signs and symptoms of mild hypoglycemia, such as hunger, irritability, weakness, headache, and blood glucose level lower than 70 mg/dL (3.9 mmol/L). |
| Evaluating | Making judgments, conclusions, or validations based on evidence; comparing observed outcomes with expected ones<br>Example: Determining that treatment for mild hypoglycemia was effective if the blood glucose level returned to a normal level at 70 mg/dL (3.9 mmol/L) |
| Synthesizing/Creating | Generating or producing a new outcome or plan by putting parts of information together<br>Example: Manifestations such as polyuria, polydipsia, polyphagia, vomiting, abdominal pain, weakness, confusion, and Kussmaul's respirations indicate diabetic ketoacidosis. Thus, the nurse designs a safe and individualized plan of care with the interprofessional health care team for a client with diabetes mellitus that meets the client's physiological, psychosocial, safety, and health maintenance needs |

Adapted from: Understanding Bloom's (and Anderson and Krathwohl's) Taxonomy, 2015, ProEdit, Inc.
http://www.proedit.com/understanding-blooms-and-anderson-and-krathwohls-taxonomy/

The practice of nursing requires critical thinking and decision-making when making clinical judgments. Therefore, you will not encounter any knowledge or understanding questions on the NCLEX®. Questions on this examination are written at the applying level or at higher levels of cognitive ability. Table 1-1 provides descriptions and examples of each level of cognitive ability. Box 1-2 presents an example of an applying question.

### Client Needs

In the test plan implemented in April 2019, the NCSBN applied a test plan framework based on Client Needs. The NCSBN identifies four major categories of Client Needs, which are Safe and Effective Care Environment, Health Promotion and Maintenance, Psychosocial Integrity, and Physiological Integrity. Some of these categories are further divided into subcategories. Refer to Chapter 5 for a detailed description of the categories of Client Needs and the NCLEX-RN examination, and refer to Table 1-2 for the percentages of questions from each Client Needs category.

### Integrated Processes

The NCSBN identifies five processes in the test plan that are foundational to the practice of nursing. These processes are incorporated throughout the major categories of Client Needs. The Integrated Process subcategories are Caring, Communication and Documentation, Culture and Spirituality, Nursing Process (Assessment, Analysis, Planning, Implementation, and Evaluation), and Teaching and Learning. Refer to Chapter 10 for a detailed description of the Integrated Processes and the NCLEX-RN® examination.

**BOX 1-2 Level of Cognitive Ability: Applying**

A woman at 32 weeks' gestation is brought into the emergency department after an automobile crash. The client is bleeding vaginally and fetal assessment indicates moderate fetal distress. Which action would the nurse take **first** in an attempt to reduce the stress on the fetus?

1. Start intravenous (IV) fluids at a keep open rate.
2. Set up for an immediate cesarean section delivery.
3. Elevate the head of the bed to a semi-Fowler's position.
4. Administer oxygen via a face mask at 7 to 10 liters per minute.

***Answer:*** *4*

Note the **strategic word,** *first*. This question requires you to identify the *first* nursing action that you will take. Also use the **ABCs—airway, breathing, and circulation—**to answer correctly. Administering oxygen will increase the amount of oxygen for transport to the fetus, partially compensating for the loss of circulating blood volume. This action is essential regardless of the cause or amount of bleeding. IV fluids will also be initiated. Although a cesarean delivery may be needed, there are no data that indicate it is necessary at this time. The client will be positioned per health care provider's prescription.

***Level of Cognitive Ability:***
Applying

## Types of Questions on the Examination

The types of questions that may be administered on the examination include multiple choice; fill in the blank; multiple response (select all that apply); ordered response (also known as drag and drop); questions that contain a figure, chart/exhibit, or graphic option item; and audio item formats. Depending on when you take your examination, you may also encounter case study item formats. Some questions on the NCLEX® may require you to use the mouse and cursor on the computer.

**TABLE 1-2 Client Needs Categories and Percentage of Questions on the NCLEX-RN® Examination**

| Client Needs Category | Percentage of Questions |
|---|---|
| **Safe and Effective Care Environment** | |
| Management of Care | 17-23 |
| Safety and Infection Control | 9-15 |
| **Health Promotion and Maintenance** | 6-12 |
| **Psychosocial Integrity** | 6-12 |
| **Physiological Integrity** | |
| Basic Care and Comfort | 6-12 |
| Pharmacological and Parenteral Therapies | 12-18 |
| Reduction of Risk Potential | 9-15 |
| Physiological Adaptation | 11-17 |

From: National Council of State Boards of Nursing: *2019 NCLEX-RN® detailed test plan*, Chicago, 2018, National Council of State Boards of Nursing.

For example, you may be presented with a visual that displays the heart of an adult client. In this visual, you may be asked to "point and click" (using the mouse) on the area where you would place the stethoscope to count the apical heart rate. In all types of questions, the answer is scored as either right or wrong. Credit is not given for a partially correct answer. However, in the future, there may be a scoring method used that allows for partial credit for NGN®-style item types. In addition, all question types may include pictures, graphics, tables, charts, or sound. The NCSBN provides specific directions for you to follow with all question types to guide you in your process of testing. Be sure to read these directions as they appear on the computer screen. Examples of some of these types of questions are noted in this chapter. Most question types are placed in this book, and all types, including case studies, also known as testlets, and NGN® item types, are on the accompanying Evolve site.

## Multiple-Choice Questions

Many of the questions that you will be asked to answer will be in the multiple-choice format. These questions provide you with data about a client situation and four answers, or options.

## Fill-in-the-Blank Questions

Fill-in-the-blank questions may ask you to perform a medication calculation, determine an intravenous flow rate, or calculate an intake or output record on a client. You will need to type only a number (your answer) in the answer box. If the question requires rounding the answer, this needs to be performed at the end of the calculation. The rules for rounding an answer are described in the tutorial provided by the NCSBN, and are also provided in the specific question on the computer screen. In addition, you must type in a decimal point if necessary and noted in the question directions. See Box 1-3 for an example.

## Multiple-Response Questions

For a multiple-response question, you will be asked to select or check all of the options, such as nursing interventions, that relate to the information in the question. In this question type, there may be one or more correct answers. No partial credit is given for correct selections. You need to do exactly as the question asks, which will be to select all of the options that apply. See Box 1-4 for an example.

### BOX 1-3 Fill-in-the-Blank Question

The health care provider prescribes 12 mEq of liquid potassium chloride. The medication label reads 20 mEq/15 mL. The nurse needs to administer how many milliliters (mL) to the client?

***Answer:* *9 mL***

Focus on the **subject,** the amount of mL to be administered, and on the **data in the question.** For this fill-in-the-blank question, use the formula for calculating medication doses. Once the dose is determined, you will need to type your numeric answer in the answer box. Always follow the specific directions noted on the computer screen when answering a question. Also, remember that there will be an on-screen calculator on the computer for your use to confirm your answer.

***Formula:***

$$\frac{\text{Desired}}{\text{Available}} \times \text{mL} = \text{mL per dose}$$

$$\frac{12\ \text{mEq}}{20\ \text{mEq}} \times 15\ \text{mL} = 9\ \text{mL}$$

### BOX 1-4 Multiple-Response Question

The nurse is caring for a client with a terminal condition who is dying. Which respiratory assessment findings would indicate to the nurse that death is imminent? **Select all that apply.**

- ☑ **1.** Dyspnea
- ☑ **2.** Cyanosis
- ❑ **3.** Kussmaul's respiration
- ❑ **4.** Tachypnea without apnea
- ☑ **5.** Irregular respiratory pattern
- ☑ **6.** Adventitious bubbling lung sounds

***Answer:* *1, 2, 5, 6***

Focus on the **subject**, assessment findings in a client who is dying. In a multiple-response question, you will be asked to select or check all the options, such as signs and symptoms or interventions that relate to the information in the question. Be sure to follow the specific directions given on the computer screen. To answer this question, think about the respiratory assessment findings that indicate death is imminent. These include altered patterns of respiration, such as slow, labored, irregular, or Cheyne-Stokes pattern (alternating periods of apnea and deep, rapid breathing); increased respiratory secretions and adventitious bubbling lung sounds (death rattle); irritation of the tracheobronchial airway as evidenced by hiccups, chest pain, respiratory fatigue, or exhaustion; and poor gas exchange as evidenced by hypoxia, dyspnea, or cyanosis. Kussmaul's respirations are abnormally deep, very rapid sighing respirations characteristic of diabetic ketoacidosis.

## Ordered-Response (Prioritizing) Questions

In this type of question, you will be asked to use the computer mouse to drag and drop your nursing actions in order of priority. Information will be presented in a question and, based on the data, you need to determine what you will do first, second, third, and so forth. The unordered options will be located in boxes on

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Home | History | Study Mode | Calculator | Help

Question 14 of 20 | 14 | Go | Bookmark | Stop

A unit of packed red blood cells has been prescribed for a client with low hemoglobin and hematocrit levels. The nurse notifies the blood bank of the prescription, and a blood specimen is drawn from the client for typing and cross-matching. The nurse receives a telephone call from the blood bank and is informed that the unit of blood is ready for administration. In what **priority** order should the nurse perform the actions necessary to administer the blood? **Arrange the actions in the order that they should be performed. All options must be used.**

Drag the text in the left column to the correct order in the right column.

Document that the blood was administered. | 1
Obtain the unit of blood from the blood bank. | 2
Ensure that an informed consent has been signed. | 3
Insert an 18- or 19-gauge intravenous (IV) catheter into the client. | 4
Check the health care provider's prescription for administering blood. | 5
Ask a licensed nurse to assist in confirming blood compatibility and verifying client identity. | 6

Rationale | Strategy | Nursing Tip | Reference | Submit | Reset

**FIGURE 1-1** Example of an ordered-response question.

the left side of the screen, and you need to move all options in order of priority to ordered-response boxes on the right side of the screen. Specific directions for moving the options are provided with the question. See Fig. 1-1 for an example. Examples of this question type are located on the accompanying Evolve site.

### Figure Questions

A question with a picture or graphic will ask you to answer the question based on the picture or graphic. The question could contain a chart, a table, or a figure or illustration. You also may be asked to use the computer mouse to point and click on a specific area in the visual. A figure or illustration may appear in any type of question, including a multiple-choice question. See Box 1-5 for an example.

### Chart/Exhibit Questions

In this type of question, you will be presented with a problem and a chart or exhibit. You will be provided with three or more tabs or buttons that you need to click to obtain the information needed to answer the question. A prompt or message will appear that will indicate the need to click on a tab or button. See Box 1-6 for an example.

### Graphic Option Questions

In this type of question, the option selections will be pictures rather than text. Each option will be preceded by a circle, and you will need to use the computer mouse to click in the circle that represents your answer choice. See Box 1-7 for an example.

### Audio Questions

Audio questions will require listening to a sound to answer the question. These questions will prompt you to use the headset provided and to click on the sound icon. You will be able to click on the volume button to adjust the volume to your comfort level, and you will be able to listen to the sound as many times as necessary. Content examples include, but are not limited to, various lung sounds, heart sounds, or bowel sounds. Examples of this question type are located on the accompanying Evolve site (Fig. 1-2).

### Case Study Questions

Case study questions are the expected format for the NGN®-style items. These case studies may be single-episode, focusing on one point in time, or unfolding, focusing on multiple time points in client care. The single episode case studies will be accompanied by one NGN style question and the unfolding case studies will be accompanied by 6 questions in NGN style. Each type of case study is aimed at testing one or more of the cognitive skills or processes associated with the NCSBN Clinical Judgment Measurement Model (see Box 1-1). Currently, the NGN item types include enhanced hot spot/highlighting, extended drag and drop, extended multiple response, cloze (drop down), and matrix (grid). Examples of these NGN item types can be located on the Evolve site accompanying this book.

## Registering to Take the Examination

It is important to obtain an NCLEX® Examination Candidate Bulletin from the NCSBN Web site at http://www.ncsbn.org, because this bulletin provides all of the information you need to register for and schedule your examination. It also provides you with Web site and telephone information for NCLEX® examination contacts. The initial step in the registration

## BOX 1-5 Figure Question

The nurse performs client rounds and notes that a client with a respiratory disorder is wearing this oxygen device (refer to figure). The nurse would document that the client is receiving oxygen by which type of low-flow oxygen delivery system? **Refer to figure.**

(Figure from Potter P, Perry A, Stockert P, Hall A: *Fundamentals of nursing,* ed 9, St. Louis, 2017, Mosby.)

1. Venturi mask
2. Nasal cannula
3. Simple face mask
4. Partial rebreather mask

***Answer: 3***

Focus on the **subject,** the type of face mask that the client is wearing. For some of these question types, you need to use the computer mouse and point and click at a designated area to answer the question. For this question, use of the computer mouse is not necessary. A simple face mask is used to deliver low-flow oxygen concentrations of 40% to 60% for short-term oxygen therapy. It also may be used in an emergency. A minimum flow rate of 5 L/min is needed to prevent the rebreathing of exhaled air. The simple face mask fits over the nose and mouth, has exhalation ports, and has a tube that connects to the oxygen source. A Venturi mask is a high-flow oxygen delivery system that delivers an accurate oxygen concentration. An adaptor is located between the bottom of the mask and the oxygen source. The adaptor contains holes of different sizes that allow specific amounts of air to mix with the oxygen. The nasal cannula contains nasal prongs that are used to deliver oxygen flow rates at 1 to 6 L/min. A partial rebreather mask is a mask with a reservoir bag without flaps. It provides oxygen concentrations of 60% to 75% with flow rates of 6 to 11 L/min.

## BOX 1-6 Chart/Exhibit Question

Oral prednisone is prescribed for a hospitalized client. The nurse reviews the client's medical record and is **most** concerned about this prescription because of which documented item? **Refer to chart.**

CHART/EXHIBIT

CLIENT'S CHART

**History:** Diabetes mellitus
Hypertension

**Medications:** Furosemide 40 mg oral daily

**Diagnostic Tests:** Electrocardiogram: normal

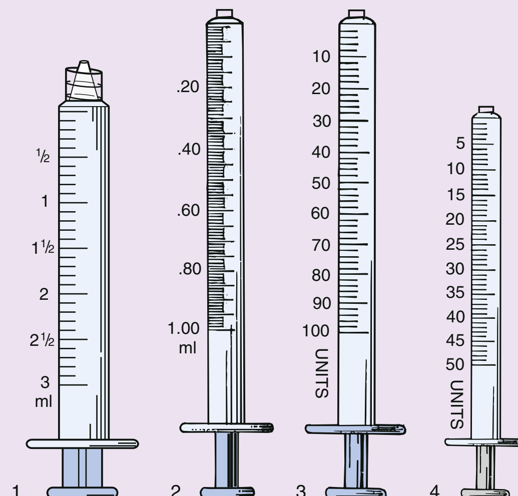
1. Furosemide
2. Hypertension
3. Diabetes mellitus
4. Normal electrocardiogram

***Answer: 3***

Note the **strategic word,** *most.* This chart/exhibit question provides you with data from a client's medical chart, identifies a prescribed medication, and asks about a concern related to this medication. Read all the **data in the question** and the client's chart. Use nursing knowledge about the interactions and effects of prednisone, and recall that this medication may increase the blood glucose level. This will assist in directing you to option 3. For these question types, be certain to read all of the data in the client's chart before selecting the answer. Remember you will be provided with tabs to click to read information.

## BOX 1-7 Graphic Options Question

The primary health care provider prescribes a tuberculin skin test to be done on a client. Which syringe would the nurse select to perform the test? **Refer to Figures 1 to 4.**




(Figure from Potter P, Perry A, Stockert P, Hall A: *Fundamentals of nursing,* ed 9, St. Louis, 2017, Mosby.)

***Answer: 2***

Focus on the **subject,** the procedure for administering a tuberculin skin test. This question requires you to select the picture that represents your answer choice. To perform a tuberculin skin test, the nurse would use a tuberculin syringe that is marked in 0.01 (hundredths) because the dose for administration is less than 1 mL. Option 1 is a 3-mL syringe and is marked in 0.1 (tenths) and is used for most subcutaneous or intramuscular injections. Insulin syringes are available in 50 and 100 units and are used to administer insulin.

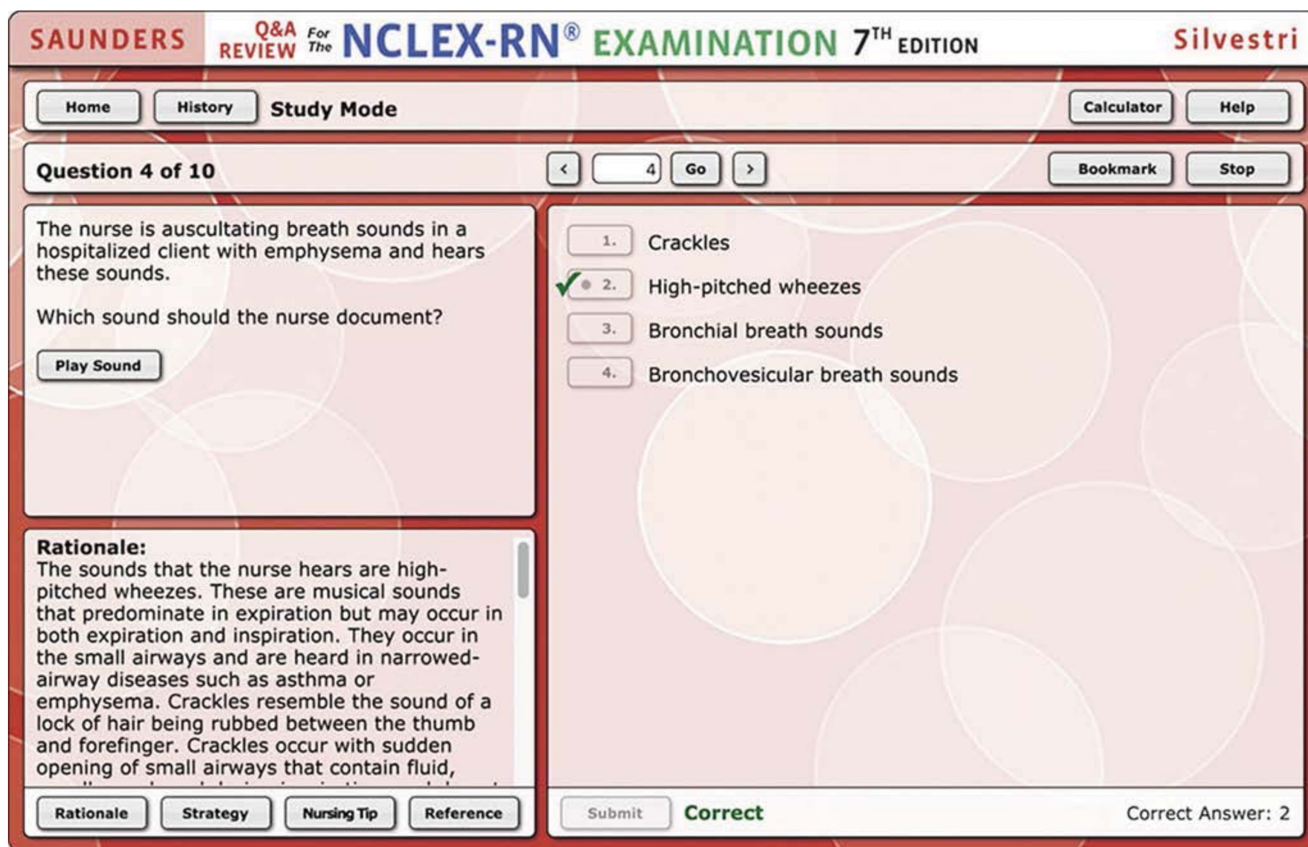



FIGURE 1-2 Example of an audio question.

process is to submit an application to the state board of nursing in the state in which you intend to obtain licensure. You need to obtain information from the board of nursing regarding the specific registration process because the process may vary from state to state. Then, use the NCLEX® Examination Candidate Bulletin as your guide to complete the registration process.

Following the registration instructions and completing the registration forms precisely and accurately are important. Registration forms not properly completed or not accompanied by the proper fees in the required method of payment will be returned to you and will delay testing. You must pay a fee for taking the examination; you also may have to pay additional fees to the board of nursing in the state in which you are applying.

## Authorization to Test Form and Scheduling an Appointment

Once you are eligible to test, you will receive an Authorization to Test (ATT) form. You cannot make an appointment until you receive an ATT form. Note the validity dates on the ATT form, and schedule a testing date and time before the expiration date on the ATT form. The NCLEX® Examination Candidate Bulletin provides you with the directions for scheduling an appointment and you do not have to take the examination in the same state in which you are seeking licensure.

The ATT form contains important information, including your test authorization number, candidate identification (ID) number, and validity date. You need to take your ATT form to the testing center on the day of your examination. You will not be admitted to the examination if you do not have it.

## Changing Your Appointment

If for any reason you need to change your appointment to test, you can make the change on the candidate Web site or by calling candidate services. Refer to the NCLEX® Examination Candidate Bulletin for this contact information and other important procedures for canceling and changing an appointment. If you fail to arrive for the examination or fail to cancel your appointment to test without providing appropriate notice, you will forfeit your examination fee and your ATT form will be invalidated. This information will be reported to the board of nursing in the state in which you have applied for licensure, and you will be required to register and pay the testing fees again.

## The Day of the Examination

It is important that you arrive at the testing center at least 30 minutes before the test is scheduled. If you arrive late for the scheduled testing appointment, you may be required to forfeit your examination appointment. If it is necessary to forfeit your appointment, you will need to reregister for the examination and pay an additional fee. The board of nursing will be notified that you did not take the test. A few days before your

scheduled date of testing, take the time to drive to the testing center to determine its exact location, the length of time required to arrive at that destination, and any potential obstacles that might delay you, such as road construction, traffic, or parking sites.

In addition to the ATT form, you must have proper identification such as a U.S. driver's license, passport, U.S. state ID, or U.S. military ID to be admitted to take the examination. All acceptable ID must be valid and not expired and contain a photograph and signature (in English). In addition, the first and last names on the ID must match the ATT form. According to the NCSBN guidelines, any name discrepancies require legal documentation, such as a marriage license, divorce decree, or court action legal name change.

## Testing Accommodations

If you require testing accommodations, you should contact the board of nursing before submitting a registration form. The board of nursing will provide the procedures for the request. The board of nursing must authorize testing accommodations. After board of nursing approval, the NCSBN reviews the requested accommodations and must approve the request. If the request is approved, the candidate will be notified and provided the procedure for registering for and scheduling the examination.

## The Testing Center

The testing center is designed to ensure complete security of the testing process. Strict candidate ID requirements have been established. You will be asked to read the rules related to testing. A digital fingerprint and palm vein print will be taken. A digital signature and photograph will also be taken at the testing center. These identity confirmations will accompany the NCLEX® examination results. In addition, if you leave the testing room for any reason, you may be required to perform these identity confirmation procedures again to be readmitted to the room.

Personal belongings are not allowed in the testing room; all electronic devices must be placed in a sealable bag provided by the test administrator and kept in a locker. Any evidence of tampering with the bag could result in a written incident report and dismissal from the test center with no exam refund. A locker and locker key will be provided for you; however, storage space is limited, so you must plan accordingly. In addition, the testing center will not assume responsibility for your personal belongings. The testing waiting areas are generally small; friends or family members who accompany you are not permitted to wait in the testing center while you are taking the examination.

Once you have completed the admission process, the test administrator will escort you to the assigned computer. You will be seated at an individual workspace area that includes computer equipment, appropriate lighting, an erasable note board, and a marker. No items, including unauthorized scratch paper, are allowed into the testing room. Eating, drinking, or the use of tobacco is not allowed in the testing room. You will be observed at all times by the test administrator while taking the examination. In addition, video and audio recordings of all test sessions are made. The testing center has no control over the sounds made by typing on the computer by others. If these sounds are distracting, raise your hand to summon the test administrator. Earplugs are available upon request.

You must follow the directions given by the testing center staff and must remain seated during the test except when authorized to leave. If you think that you have a problem with the computer, need a clean note board, need to take a break, or need the test administrator for any reason, you must raise your hand. You are also encouraged to access the NCSBN candidate Web site to obtain additional information about the physical environment of the testing center and to view a virtual tour of the testing center.

## Testing Time

The maximum testing time is 6 hours; this period includes the tutorial, the sample items, all breaks, and the examination. All breaks are optional. The first optional break will be offered after 2 hours of testing. The second optional break is offered after 3.5 hours of testing. Remember that all breaks count against testing time. If you take a break, you must leave the testing room and, when you return, you may be required to perform identity confirmation procedures to be readmitted.

## Length of the Examination

The minimum number of questions that you will need to answer is 75. Of these 75 questions, 60 will be operational (scored) questions and 15 will be pretest (unscored) questions. The maximum number of questions in the test is 265. Fifteen of the total number of questions that you need to answer will be pretest (unscored) questions.

The pretest questions are questions that may be presented as scored questions on future examinations. These pretest questions are not identified as such. In other words, you do not know which questions are the pretest (unscored) questions; however, these pretest (unscored) questions will be administered among the first 75 questions in the test.

## Pass-or-Fail Decisions

All examination questions are categorized by test plan area and level of difficulty. This is an important point to keep in mind when you consider how the computer makes a pass-or-fail decision because a pass-or-fail decision is not based on a percentage of correctly answered questions.

The NCSBN indicates that a pass-or-fail decision is governed by three different scenarios. The first scenario is referred to as the 95% Confidence Interval Rule. In this scenario the computer stops administering test questions when it is 95% mathematically certain that the test-taker's ability is either clearly above or below the passing standard. The second scenario is known as the Maximum-Length Exam Rule and it is in this scenario that the final ability estimate of the test-taker is considered. If the final ability estimate is above the passing standard, the test-taker passes; if it is below the passing standard, the test-taker fails.

The third scenario is known as the Run-Out-Of-Time (R.O.O.T.) Rule. If the examination ends because the test-taker ran out of time, the computer may not have enough information with 95% certainty to make a clear pass-or-fail decision. If this is the case, the computer will review the test-taker's performance during testing. If the test-taker has not answered the minimum number of required questions, the test-taker fails. If the test-taker's ability estimate was consistently above the passing standard on the last 60 questions, the test-taker passes. If the test-taker's ability estimate falls below the passing standard, even once, the test-taker fails. Additional information about pass-or-fail decisions can be found in the NCLEX® Examination Candidate Bulletin located at http://www.ncsbn.org.

## Completing the Examination

When the examination has ended, you will complete a brief computer-delivered questionnaire about your testing experience. After you complete this questionnaire, you need to raise your hand to summon the test administrator. The test administrator will collect and inventory all note boards and then permit you to leave.

Following completion of the NCLEX, you may be asked to participate in the NCSBN's research study on NGN style questions. If you agree to participate you will be asked to answer NGN type questions.

## Processing Results

Every computerized examination is scored twice, once by the computer at the testing center and again after the examination is transmitted to the test scoring center. No results are released at the testing center; testing center staff do not have access to examination results. The board of nursing receives your result and your result will be mailed to you approximately 1 month after you take the examination. In some states, an unofficial result can be obtained via the Quick Results Service two business days after taking the examination. There is a fee for this service and information about obtaining your NCLEX® result by this method can be obtained on the NCSBN Web site under candidate services.

## Candidate Performance Report

A candidate performance report is provided to a test-taker who failed the examination. This report provides the test-taker with information about his or her strengths and weaknesses in relation to the test plan framework and provides a guide for studying and retaking the examination. If a retake is necessary, the candidate must wait at least 45 days between examination administrations, depending on state procedures. Test-takers should refer to the state board of nursing in the state in which licensure is sought for procedures regarding when the examination can be taken again.

## Interstate Endorsement

Because the NCLEX-RN® examination is a national examination, you can take the examination in any state. Your original license, however, will come from the state in which you applied for licensure. When licensure is received, you can apply for interstate endorsement, which is obtaining a license in another state to practice nursing in that state. The procedures and requirements for interstate endorsement may vary from state to state, and these procedures can be obtained from the state board of nursing in the state in which endorsement is sought.

**BOX 1-8 Foreign-Educated Nurse: Some Documents Needed to Obtain Licensure**

1. Proof of citizenship or lawful alien status
2. Work visa
3. VisaScreen certificate
4. Commission on Graduates of Foreign Nursing Schools (CGFNS) certificate
5. Criminal background check documents
6. Official transcripts of educational credentials sent directly to credentialing agency or board of nursing from home country school of nursing
7. Validation of a comparable nursing education as that provided in U.S. nursing programs; this may include theoretical instruction and clinical practice in a variety of nursing areas, including, but not limited to, medical nursing, surgical nursing, pediatric nursing, maternity and newborn nursing, community and public health nursing, and mental health nursing.
8. Validation of safe professional nursing practice in home country
9. Copy of nursing license or diploma or both
10. Proof of proficiency in the English language
11. Photograph(s)
12. Social security number
13. Application and fees

## Nurse Licensure Compact

It may be possible to practice nursing in another state under the mutual recognition model of nursing licensure if the state has enacted a Nurse Licensure Compact. To obtain information about the Nurse Licensure Compact and the states that are part of this interstate compact, access the NCSBN Web site at http://www.ncsbn.org.

## The Foreign-Educated Nurse

An important first step in the process of obtaining information about becoming a registered nurse in the United States is to access the NCSBN website at http://www.ncsbn.org and obtain information provided for international nurses in the NCLEX Web site link. The NCSBN provides information about some of the documents you need to obtain as an international nurse seeking licensure in the United States and about credentialing agencies. Refer to Box 1-8 for a listing of some of these documents. The NCSBN also provides information regarding the requirements for education and English proficiency, and immigration requirements such as visas and VisaScreen. You are encouraged to access the NCSBN Web site to obtain the most current information about seeking licensure as a registered nurse in the United States.

An important factor to consider as you pursue this process is that some requirements may vary from state to state. You need to contact the board of nursing in the state in which you are planning to obtain licensure to determine the specific requirements and documents that you need to submit.

Boards of nursing can decide either to use a credentialing agency to evaluate your documents or to review your documents at the specific state board, known as in-house evaluation. When you contact the board of nursing in the state in which you intend to work as a nurse, inform them that you were educated outside of the United States and ask that they send you an application to apply for licensure by examination. Be sure to specify that you are applying for registered nurse (RN) licensure. You should also ask about the specific documents needed to become eligible to take the NCLEX examination. You can obtain contact information for each state board of nursing through the NCSBN Web site at http://www.ncsbn.org. In addition, you can write to the NCSBN regarding the NCLEX® examination. The address is 111 East Wacker Drive, Suite 2900, Chicago, IL 60601. The telephone number for the NCSBN is 1-866-293-9600; the international telephone is 011-1-312-525-3600; the fax number is 1-312-279-1032.

UNIT II



# Client Needs

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CHAPTER 5

# Client Needs and the NCLEX-RN® Test Plan

In the new test plan, which was implemented in April 2019, the National Council of State Boards of Nursing (NCSBN) identified a test plan framework that was based on Client Needs. This framework was selected on the basis of the findings in a practice analysis study of newly licensed registered nurses in the United States. This study identified the nursing activities performed by entry-level nurses. Also, according to the NCSBN, the Client Needs categories provide a structure for defining nursing actions and competencies across all settings for all clients. The NCSBN identifies four major categories of Client Needs. Some of these categories are further divided into subcategories, and the percentage of test questions in each subcategory is identified in Table 5-1.

The information in this chapter related to the test plan was obtained from the NCSBN Web site at http://www.ncsbn.org and from the NCSBN *NCLEX-RN® Examination Test Plan*, Effective April 2019. Additional information regarding the test and its development can be obtained by accessing the NCSBN Web site at http://www.ncsbn.org or by writing to the National Council of State Boards of Nursing, 111 E. Wacker Drive, Suite 2900, Chicago, IL 60601.

**TABLE 5-1 Client Needs Categories and Percentage of Questions on the NCLEX-RN® Examination**

| Client Needs Category | Percentage of Questions |
|---|---|
| **Safe and Effective Care Environment** | |
| Management of Care | 17-23 |
| Safety and Infection Control | 9-15 |
| **Health Promotion and Maintenance** | 6-12 |
| **Psychosocial Integrity** | 6-12 |
| **Physiological Integrity** | |
| Basic Care and Comfort | 6-12 |
| Pharmacological and Parenteral Therapies | 12-18 |
| Reduction of Risk Potential | 9-15 |
| Physiological Adaptation | 11-17 |

From National Council of State Boards of Nursing: *2019 NCLEX-RN® detailed test plan*, Chicago, 2018, National Council of State Boards of Nursing.

## Physiological Integrity

The Physiological Integrity category includes four subcategories: Basic Care and Comfort, Pharmacological and Parenteral Therapies, Reduction of Risk Potential, and Physiological Adaptation. The NCSBN describes the content tested in each subcategory. Basic Care and Comfort addresses content that tests the ability of the nurse to make clinical judgments when providing basic care and comfort measures and assisting the client in performing activities of daily living. Pharmacological and Parenteral Therapies addresses content that tests the ability required to administer medications and parenteral therapies and to make clinical judgments about pharmacological therapies. Reduction of Risk Potential addresses content that tests the ability required by the nurse to make clinical judgments in order to prevent complications or health problems related to the client's condition, or any prescribed treatments or procedures. Physiological Adaptation addresses content that tests the nurse's ability to make clinical judgments required to provide care to clients with acute, chronic, or life-threatening conditions.

The NCSBN identifies related content and specific nursing activities for the subcategories of the Physiological Integrity category. For specific content and nursing activities, refer to the NCSBN test plan that can be located at the NCSBN Web site at http://www.ncsbn.org. See Box 5-1 for examples of questions in this Client Needs category, and refer to Chapter 6, for practice questions reflective of this Client Needs category.

## Safe and Effective Care Environment

The Safe and Effective Care Environment category includes two subcategories: (1) Management of Care and (2) Safety and Infection Control. The NCSBN describes the content tested in each subcategory. Management of Care addresses content that tests the clinical judgment skills and ability of the nurse to provide and direct nursing care that will enhance the care delivery setting to protect clients, health care personnel, and others. Safety and Infection Control addresses content that tests the nurse's ability required to protect clients, health care personnel, and others from health and environmental hazards.

The NCSBN identifies related content and nursing activities for the subcategories of the Safe and Effective Care Environment category. For specific content and nursing activities, refer to the NCSBN test plan. See Box 5-2 for examples of questions in this Client Needs category, and refer to Chapter 7, for practice questions reflective of this Client Needs category.

**BOX 5-1 Physiological Integrity Questions**

### Basic Care and Comfort

A client with right-sided weakness needs to learn how to use a cane for home maintenance of mobility. The nurse would teach the client to position the cane by holding it in which way?

1. Left hand and 6 inches lateral to the left foot
2. Right hand and 6 inches lateral to the right foot
3. Left hand and placing the cane in front of the left foot
4. Right hand and placing the cane in front of the right foot

***Answer:*** *1*

This question addresses content related to the use of an assistive device. Focus on the **subject,** use of a cane for a client with right-sided weakness. The client is taught to hold the cane on the opposite side of the weakness, because with normal walking the opposite arm and leg move together (called *reciprocal motion*). The cane is placed 6 inches lateral to the fifth toe.

### Pharmacological and Parenteral Therapies

A client is receiving furosemide 40 mg orally daily. Which finding would indicate to the nurse that the client is experiencing an adverse effect related to the medication?

1. A chloride level of 98 mEq/L (98 mmol/L)
2. A sodium level of 135 mEq/L (135 mmol/L)
3. A potassium level of 3.1 mEq/L (3.1 mmol/L)
4. A blood urea nitrogen (BUN) of 15 mg/dL (5.4 mmol/L)

***Answer:*** *3*

This question addresses content related to a medication. Focus on the **subject,** an adverse effect. Furosemide is a loop diuretic. The medication can produce acute, profound water loss; volume and electrolyte depletion; dehydration; decreased blood volume; and circulatory collapse. Option 3 is the only option that indicates an electrolyte depletion because the normal potassium level is 3.5 to 5.0 mEq/L (3.5 to 5.0 mmol/L). The normal chloride level is 98 to 107 mEq/L (98 to 107 mmol/L). The normal sodium level is 135 to 145 mEq/L (135 to 145 mmol/L). The normal BUN is 10 to 20 mg/dL (3.6 to 7.1 mmol/L).

### Reduction of Risk Potential

A client is scheduled to undergo a renal biopsy. To minimize the risk of postprocedure complications, the nurse would report which laboratory result to the primary health care provider before the procedure?

1. Potassium: 3.8 mEq/L (3.8 mmol/L)
2. Prothrombin time: 15 seconds (15 seconds)
3. Serum creatinine: 1.2 mg/dL (106 mcmol/L)
4. Blood urea nitrogen (BUN): 18 mg/dL (6.48 mmol/L)

***Answer:*** *2*

This question addresses a potential postprocedure complication of a diagnostic test (renal biopsy). Focus on the **subject,** an abnormal laboratory result. Postprocedure hemorrhage is a complication after renal biopsy. Because of this, prothrombin time is assessed before the procedure. The normal prothrombin time range is 11 to 12.5 seconds (11 to 12.5 seconds). The nurse ensures that these results are available and reports abnormalities promptly. The normal potassium is 3.5 to 5.0 mEq/L (3.5 to 5.0 mmol/L), the normal serum creatinine for a male is 0.6 to 1.2 mg/dL (53 to 106 mcmol/L) and for a female is 0.5 to 1.1 mg/dL (44 to 97 mcmol/L), and the normal BUN is 10 to 20 mg/dL (3.6 to 7.1 mmol/L).

### Physiological Adaptation

A pregnant client tells the nurse that she felt wetness on her peripad and that she found some clear fluid. The nurse quickly inspects the perineum and notes the presence of the umbilical cord. The nurse would take which **immediate** action?

1. Monitor the fetal heart rate.
2. Notify the primary health care provider.
3. Transfer the client to the delivery room.
4. Place the client in Trendelenburg position.

***Answer:*** *4*

This question addresses an acute and life-threatening physical health condition. Note the **strategic word,** *immediate.* On inspection of the perineum, if the umbilical cord is noted, the nurse immediately places the client in Trendelenburg position while holding the presenting part upward to relieve the cord compression. This position is maintained while the nurse calls out for assistance with fetal heart rate monitoring and for notification of the primary health care provider. The client is transferred to the delivery room when prescribed by the primary health care provider.

## Health Promotion and Maintenance

The Health Promotion and Maintenance category addresses the principles related to growth and development. According to the NCSBN, this Client Needs category also addresses content that tests the clinical judgment skills and ability required to assist the client, family members, and/or significant others to prevent health problems, recognize alterations in health to detect health problems early, and develop health practices and strategies that promote and support wellness and achieve optimal health.

The NCSBN identifies related content and specific nursing activities for the Health and Promotion and Maintenance category. For specific content and nursing activities, refer to the NCSBN test plan. See Box 5-3 for examples of questions in this Client Needs category, and refer to Chapter 8, for practice questions reflective of this Client Needs category.

## Psychosocial Integrity

The Psychosocial Integrity category addresses content that tests the clinical judgment skills required to promote and support the client, family, and/or significant other's ability to cope, adapt, and/or solve problems during stressful events. According to the NCSBN, this Client Needs category also addresses the emotional, mental, and social well-being of the client, family, or significant other, and the clinical judgment skills required to care for the client with an acute or chronic mental illness.

The NCSBN identifies related content and specific nursing activities for the Psychosocial Integrity category. For specific content and nursing activities, refer to the NCSBN test plan. See Box 5-4 for examples of questions in this Client Needs category, and refer to Chapter 9, for practice questions reflective of this Client Needs category.

## BOX 5-2 Safe and Effective Care Environment Questions

### Management of Care

The registered nurse is planning the client assignments for the day. Which is the appropriate client assignment for the assistive personnel (AP)?

1. A client requiring a colostomy irrigation
2. A client receiving continuous tube feedings
3. A client who requires stool specimen collections
4. A client who has difficulty swallowing food and fluids

***Answer: 3***

This question addresses content related to assignment-making and delegation. Focus on the **subject**, the appropriate assignment for the AP. Work that is delegated to others must be done consistent with the individual's level of expertise and licensure or lack of licensure. In this situation, the most appropriate assignment for the AP is to care for the client who requires stool specimen collections. Colostomy irrigations and tube feedings are not performed by the AP. The client with difficulty swallowing food and fluids is at risk for aspiration. Remember, the health care provider needs to be competent and skilled to perform the assigned task or activity.

### Safety and Infection Control

A client diagnosed with tuberculosis (TB) is scheduled to go to the radiology department for a chest radiograph. The nurse would take which action when preparing to transport the client?

1. Apply a mask to the client.
2. Apply a mask and gown to the client.
3. Apply a mask, gown, and gloves to the client.
4. Notify the radiology department so that the personnel can be sure to wear masks when the client arrives.

***Answer: 1***

This question addresses content related to airborne precautions. Focus on the **subject**, transporting a client with TB. Institution policies and procedures for airborne precautions are always followed; however, clients known or suspected of having TB need to wear a mask when out of the hospital room to prevent the spread of the infection to others. Gown and gloves are not necessary. Others are not protected unless the infected client wears the mask.

## BOX 5-3 Health Promotion and Maintenance Questions

The postpartum nurse has instructed a new mother on how to bathe her newborn. The nurse demonstrates the procedure to the mother and on the following day asks the mother to perform the procedure. Which observation by the nurse indicates that the mother is performing the procedure correctly?

1. The mother washes the newborn by starting with the eyes and face.
2. The mother washes the entire newborn's body and then washes the eyes, face, and scalp.
3. The mother washes the newborn by starting with the ears and then moves to the eyes and the face.
4. The mother washes the newborn by starting with the arms, chest, and back followed by the neck, arms, and face.

***Answer: 1***

This question addresses the postpartum period. Focus on the **subject**, that the mother can correctly perform the bathing procedure for her newborn. Bathing should start at the eyes and face and with the cleanest area first. Next, the external ears and behind the ears are cleaned. The newborn's neck should be washed because formula, lint, or breast milk often accumulates in the folds of the neck. Hands and arms are then washed. The newborn's legs are washed next, with the diaper area washed last. Remember to always start with the cleanest area of the body first and proceed to the dirtiest area.

A client with atherosclerosis asks the nurse about dietary modifications to lower the risk of heart disease. The nurse would encourage the client to eat which food that will lower this risk?

1. Fresh cantaloupe
2. Broiled cheeseburger
3. Mashed potato with gravy
4. Fried chicken without skin

***Answer: 1***

This question addresses health and wellness. Focus on the **subject**, the food item that will lower the risk of heart disease. To lower the risk of heart disease, the diet should be low in saturated fat, with the appropriate number of total calories. The diet should include fewer red meats and more white meat, with the skin removed. Both gravy and fried foods are high in fat. Dairy products used should be low in fat, and foods with large amounts of empty calories should be avoided. Fresh fruits and vegetables are naturally low in fat.

**Box 5-4 Psychosocial Integrity Questions**

The nurse is planning care for a client who is experiencing fear and anxiety following a myocardial infarction. Which nursing intervention would be included in the plan of care?

1. Answer questions with factual information.
2. Provide detailed explanations of all procedures.
3. Limit family involvement during the acute phase.
4. Administer an antianxiety medication to promote relaxation.

***Answer: 1***

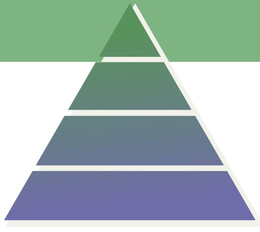
This question addresses content related to fear and anxiety following a myocardial infarction. Focus on the **subject**, an intervention that will alleviate the client's fear and anxiety. Accurate and factual information reduces fear, strengthens the nurse–client relationship, and assists the client in dealing realistically with the situation. Providing detailed information may increase the client's anxiety. Information should be provided simply and clearly. The client's family may be a source of support for the client. Therefore, limiting family involvement may or may not be helpful. Medication should not be used unless necessary.

The nurse in the mental health clinic is performing an initial assessment of a family with a diagnosis of domestic violence. Which factor would the nurse **initially** include in the assessment?

1. The coping style of each family member
2. The family's ability to use community resources
3. The family's anger toward the intrusiveness of the nurse
4. The family's denial of the violent nature of their behavior

***Answer: 1***

This question addresses assessment of a domestic violence situation. Note the **strategic word**, *initially*. The initial family assessment includes a careful history of each family member. Options 2, 3, and 4 address the family. Option 1 addresses each family member.



CHAPTER 6

# Physiological Integrity Practice Questions

1. The nurse is caring for a client who is receiving blood transfusion therapy. Which clinical manifestations would alert the nurse to a hemolytic transfusion reaction? **Select all that apply**.
   - ❑ **1.** Headache
   - ❑ **2.** Tachycardia
   - ❑ **3.** Hypertension
   - ❑ **4.** Apprehension
   - ❑ **5.** Distended neck veins
   - ❑ **6.** A sense of impending doom

***Level of Cognitive Ability:*** Analyzing
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Analyze cues
***Integrated Process:*** Nursing Process/Analysis
***Content Area:*** Complex Care: Blood Administration
***Health Problems:*** Adult Health: Immune: Hypersensitivity Reactions and Allergy
***Priority Concepts:*** Clinical Judgment; Immunity

***Answer:*** **1, 2, 4, 6**
***Rationale:*** Hemolytic transfusion reactions are caused by blood type or Rh incompatibility. When blood containing antigens different from the client's own antigens is infused, antigen-antibody complexes are formed in the client's blood. These complexes destroy the transfused cells and start inflammatory responses in the client's blood vessel walls and organs. The reaction may include fever and chills or may be life-threatening with disseminated intravascular coagulation and circulatory collapse. Other manifestations include headache, tachycardia, apprehension, a sense of impending doom, chest pain, low back pain, tachypnea, hypotension, and hemoglobinuria. The onset may be immediate or may not occur until subsequent units have been transfused. Distended neck veins are characteristics of circulatory overload.
***Test-Taking Strategy:*** Focus on the **subject**, a hemolytic transfusion reaction. Recall the pathophysiology of this type of reaction to select the correct options. Also think about other types of transfusion reactions that can occur, and recall that distended neck veins are characteristic of circulatory overload.
***Priority Nursing Tip:*** The nurse should suspect a transfusion reaction if the client develops any symptom or complains of anything unusual while receiving the blood transfusion.
***References:*** Ignatavicius, Workman, Rebar (2018), p. 835.

❖ **2.** A client has an arteriovenous (AV) fistula in place in the right upper extremity for hemodialysis treatments. When planning care for this client, which measure would the nurse implement to promote client safety?
   1. Use the right arm for blood pressure measurement.
   2. Use the fistula for all venipunctures and intravenous infusions.
   3. Ensure that small clamps are attached to the AV fistula dressing.
   4. Assess the fistula for the presence of a bruit and thrill every 4 hours.

***Level of Cognitive Ability:*** Applying
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Generate solutions
***Integrated Process:*** Nursing Process/Planning
***Content Area:*** Adult Health: Renal and Urinary
***Health Problems:*** Adult Health: Renal and Urinary: Acute Kidney Injury and Chronic Kidney Disease
***Priority Concepts:*** Perfusion; Safety

***Answer:*** **4**
***Rationale:*** AV fistulas are created by anastomosis of an artery and a vein within the subcutaneous tissues to create access for hemodialysis. Fistulas should be evaluated for the presence of thrills (palpate over the area) and bruits (auscultate with a stethoscope) as an assessment of patency. Blood pressures or venipunctures are not done on the extremity with the fistula because of the risk of clotting, infection, or damage to the fistula. The fistula is not used for venipunctures or intravenous infusions for the same reason. Clamps may be needed for an external device such as an AV shunt, but the AV fistula is internal.
***Test-Taking Strategy:*** Focus on the **subject**, an AV fistula and safety. Eliminate option 3 first because this refers to care of an AV shunt, in which there is an external cannula that can become disconnected. If accidental disconnection occurs, the small clamps can be used to occlude the ends of the cannula. Blood pressure measurement, insertion of intravenous access, and venipuncture should never be performed on the affected extremity because of the potential for infection and clotting of the fistula; therefore, eliminate options 1 and 2. The only option that relates to the **subject** of this question is option 4.
***Priority Nursing Tip:*** For the client receiving hemodialysis, the AV fistula is the client's lifeline, and the client's hemodynamic status should be closely monitored. Clients will need teaching on which medications to avoid before dialysis.
***References:*** Ignatavicius, Workman, Rebar (2018), p. 1415.

❖ **3.** A client diagnosed with both a wound infection and osteomyelitis is to receive hyperbaric oxygen therapy. During the therapy, which **priority** intervention would the nurse implement?

1. Maintaining an intravenous access
2. Ensuring that oxygen is being delivered
3. Administering sedation to prevent claustrophobia
4. Providing emotional support to the client's family

***Level of Cognitive Ability:*** Applying
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Take action
***Integrated Process:*** Nursing Process/Implementation
***Content Area:*** Skills: Oxygenation
***Health Problems:*** Adult Health: Integumentary: Wounds
***Priority Concepts:*** Clinical Judgment; Gas Exchange

***Answer:*** **2**
***Rationale:*** Hyperbaric oxygen therapy is a process by which oxygen is administered at greater than atmospheric pressure. When oxygen is inhaled under pressure, the level of tissue oxygen is greatly increased. The high levels of oxygen promote the action of phagocytes and promote healing of the wound. Because the client is placed in a closed chamber, the administration of oxygen is of primary importance. Although options 1, 3, and 4 may be appropriate interventions, option 2 is the priority.
***Test-Taking Strategy:*** Note the **strategic word**, *priority*. Use the **ABCs—airway, breathing, and circulation** and **Maslow's Hierarchy of Needs Theory** to direct you to option 2, which addresses oxygen. Also note the relationship of the words *hyperbaric oxygen* in the question and *oxygen* in the correct option.
***Priority Nursing Tip:*** Hyperbaric oxygen therapy may be a treatment measure for chronic osteomyelitis to increase tissue perfusion and promote healing.
***References:*** Lewis et al. (2017), p. 170.

❖ **4.** A client is scheduled for hydrotherapy for a burn dressing change. Which action would the nurse take to ensure that the client is comfortable during the procedure?

1. Ensure that the client is appropriately dressed.
2. Administer an opioid analgesic 30 to 60 minutes before therapy.
3. Schedule the therapy at a time when the client generally takes a nap.
4. Assign an assistive personnel (AP) to stay with the client during the procedure.

***Level of Cognitive Ability:*** Applying
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Take action
***Integrated Process:*** Nursing Process/Implementation
***Content Area:*** Pharmacology: Pain Medications: Opioid Analgesics
***Health Problems:*** Adult Health: Integumentary: Burns
***Priority Concepts:*** Pain; Tissue Integrity

***Answer:*** **2**
***Rationale:*** The client should receive pain medication approximately 30 to 60 minutes before a burn dressing change. This will help the client tolerate an otherwise painful procedure. None of the remaining options addresses the issue of pain effectively.
***Test-Taking Strategy:*** Use **Maslow's Hierarchy of Needs theory** (physiological needs are the priority). This will direct you to option 2, which addresses pain management.
***Priority Nursing Tip:*** A burn injury is extremely painful, and the client is adequately medicated before a burn dressing change to reduce pain and prevent fear of future dressing changes. Strict aseptic technique is used for dressing changes because of the risk of infection.
***References:*** Lewis et al. (2017), pp. 445–446

❖ **5.** The nurse is caring for a client diagnosed with heart failure who has a magnesium level of 0.75 mEq/L (0.3 mmol/L). Which action would the nurse take?

1. Monitor the client for irregular heart rhythms.
2. Encourage the intake of antacids with phosphate.
3. Teach the client to avoid foods high in magnesium.
4. Provide a diet of ground beef, eggs, and chicken breast.

***Level of Cognitive Ability:*** Applying
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Take action
***Integrated Process:*** Nursing Process/Implementation
***Content Area:*** Foundations of Care: Laboratory Tests
***Health Problems:*** Adult Health: Cardiovascular: Heart Failure
***Priority Concepts:*** Fluids and Electrolytes; Clinical Judgment

***Answer:*** **1**
***Rationale:*** The normal magnesium level ranges from 1.8 to 2.6 mEq/L (0.74 to 1.07 mmol/L); therefore, this client is experiencing hypomagnesemia. The client should be monitored for dysrhythmias because magnesium plays an important role in myocardial nerve cell impulse conduction; thus, hypomagnesemia increases the client's risk of ventricular dysrhythmias. The nurse avoids administering phosphate in the presence of hypomagnesemia because it aggravates the condition. The nurse instructs the client to consume foods high in magnesium; ground beef, eggs, and chicken breast are low in magnesium.
***Test-Taking Strategy:*** Focus on the **subject**, a client with heart failure who has a magnesium level of 0.75 mEq/L (0.3 mmol/L). Recalling the normal magnesium level and noting that the client is experiencing hypomagnesemia will direct you to option 1. Also, the use of the **ABCs—airway, breathing, and circulation—**will direct you to the correct option.
***Priority Nursing Tip:*** The client with hypomagnesemia is at risk for seizures. Therefore, the nurse needs to initiate seizure precautions if the magnesium level is low.
***References:*** Ignatavicius, Workman, Rebar (2018), pp. 181–182.

**6.** The nurse is assessing a pregnant client with a diagnosis of abruptio placentae. Which manifestations of this condition would the nurse expect to note? **Select all that apply**.

- ❑ 1. Uterine irritability
- ❑ 2. Uterine tenderness
- ❑ 3. Painless vaginal bleeding
- ❑ 4. Abdominal and low back pain
- ❑ 5. Strong and frequent contractions
- ❑ 6. Nonreassuring fetal heart rate patterns

***Level of Cognitive Ability:*** Analyzing
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Recognize cues
***Integrated Process:*** Nursing Process/Assessment
***Content Area:*** Maternity: Intrapartum
***Health Problems:*** Maternity: Abruptio Placentae
***Priority Concepts:*** Clinical Judgment; Perfusion

***Answer:*** **1, 2, 4, 6**
***Rationale:*** Placental abruption, also referred to as abruptio placentae, is the separation of a normally implanted placenta before the fetus is born. It occurs when there is bleeding and formation of a hematoma on the maternal side of the placenta. Manifestations include uterine irritability with frequent low-intensity contractions, uterine tenderness that may be localized to the site of the abruption, aching and dull abdominal and low back pain, painful vaginal bleeding, and a high uterine resting tone identified by the use of an intrauterine pressure catheter. Additional signs include nonreassuring fetal heart rate patterns, signs of hypovolemic shock, and fetal death. Painless vaginal bleeding is a sign of placenta previa.
***Test-Taking Strategy:*** Focus on the **subject**, manifestations of abruptio placentae. Think about the word, *abrupt.* Recalling the pathophysiology associated with this hemorrhagic condition will assist in selecting the correct options. Remember that placental abruption occurs when there is separation of the placenta and bleeding and formation of a hematoma on the maternal side of the placenta.
***Priority Nursing Tip:*** It is important to know the differences between the manifestations of abruptio placentae and placenta previa. In abruptio placentae, dark red vaginal bleeding, uterine pain and/or tenderness, and uterine rigidity are characteristic. In placenta previa, there is painless, bright red vaginal bleeding, and the uterus is soft, relaxed, and nontender.
***References:*** McKinney et al. (2018) p. 531.

❖ **7.** The nurse is caring for a client diagnosed with a herniated lumbar intervertebral disk who is experiencing low back pain. Which position would the nurse place the client in to minimize the pain?

1. Supine with the knees slightly raised
2. High-Fowler's position with the foot of the bed flat
3. Semi-Fowler's position with the foot of the bed flat
4. Semi-Fowler's position with the knees slightly raised

***Level of Cognitive Ability:*** Applying
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Take action
***Integrated Process:*** Nursing Process/Implementation
***Content Area:*** Adult Health: Musculoskeletal
***Health Problems:*** Adult Health: Neurological: Intervertebral Disk
***Priority Concepts:*** Caregiving; Pain

***Answer:*** 4

***Rationale:*** Clients with low back pain are often more comfortable in the semi-Fowler's position with the knees raised sufficiently to flex the knees (William's position). This relaxes the muscles of the lower back and relieves pressure on the spinal nerve root. Keeping the bed flat or lying in a supine position with the knees raised would excessively stretch the lower back. Keeping the foot of the bed flat will enhance extension of the spine and also stretch the lower back.

***Test-Taking Strategy:*** Focus on the **subject**, a client with a herniated lumbar intervertebral disk who is experiencing low back pain. Visualize each of the positions, noting that option 4 places the least amount of pressure on the spine.

***Priority Nursing Tip:*** A physical therapist will work with a client with a herniated lumbar intervertebral disk to develop an individualized exercise program, and the type of exercises prescribed depends on the location and nature of the injury and the type of pain. The client does not begin exercise until acute pain is reduced.

***References:*** Ignatavicius, Workman, Rebar (2018), p. 905.

❖ **8.** A client admitted to the hospital has been prescribed pyridostigmine as treatment for myasthenia gravis. When assessing the client for side effects of the medication, the nurse would ask the client about the presence of which occurrence?

1. Mouth ulcers
2. Muscle cramps
3. Feelings of depression
4. Unexplained weight gain

***Level of Cognitive Ability:*** Applying
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Recognize cues
***Integrated Process:*** Nursing Process/Assessment
***Content Area:*** Pharmacology: Neurological: Antimyasthenics
***Health Problems:*** Adult Health: Neurological: Myasthenia Gravis
***Priority Concepts:*** Clinical Judgment; Safety

***Answer:*** 2

***Rationale:*** Pyridostigmine is an acetylcholinesterase inhibitor used to treat myasthenia gravis, a neuromuscular disorder. Muscle cramps and small muscle contractions are side effects and occur as a result of overstimulation of neuromuscular receptors. Mouth ulcers, depression, and weight gain are not associated with this medication.

***Test-Taking Strategy:*** Focus on the **subject**, the side effects of pyridostigmine. It is necessary to recall that this medication is used to treat myasthenia gravis, a neuromuscular disorder. Select the option that is most closely associated with this disorder. This will direct you to the correct option.

***Priority Nursing Tip:*** Indicators of a therapeutic response to pyridostigmine include increased muscle strength, decreased fatigue, and improved chewing and swallowing functions.

***References:*** Hodgson, Kizior (2019), p. 973; Ignatavicius, Workman, Rebar (2018), p.919.

❖ **9.** A client who experienced a fractured right ankle has a short leg cast applied in the emergency department. During discharge teaching, which information would the nurse provide to the client to prevent complications?

1. Trim the rough edges of the cast after it is dry.
2. Weight bearing on the right leg is allowed once the cast feels dry.
3. Expect burning and tingling sensations under the cast for 3 to 4 days.
4. Keep the right ankle elevated above the heart level with pillows for 24 hours.

***Level of Cognitive Ability:*** Applying
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Take action
***Integrated Process:*** Teaching and Learning
***Content Area:*** Adult Health: Musculoskeletal
***Health Problems:*** Adult Health: Musculoskeletal: Skeletal Injury
***Priority Concepts:*** Client Education; Perfusion

***Answer:*** 4
***Rationale:*** Leg elevation is important to increase venous return and decrease edema. Edema can cause compartment syndrome, a major complication of fractures and casting. The client and/or family may be taught how to "petal" the cast to prevent skin irritation and breakdown, but rough edges, if trimmed, can fall into the cast and cause a break in skin integrity. Weight bearing on a fractured extremity is prescribed by the primary health care provider during follow-up examination, after radiographs are obtained. Additionally, a walking heel or cast shoe may be added to the cast if the client is allowed to bear weight and walk on the affected leg. Although the client may feel heat after the cast is applied, burning and/or tingling sensations indicate nerve damage or ischemia and are not expected. These complaints should be reported immediately.
***Test-Taking Strategy:*** Focus on the **subject**, measures to prevent complications with a short leg cast. Recall the **ABCs—airway, breathing, and circulation**. Option 4 is associated with maintenance of circulation.
***Priority Nursing Tip:*** Circulation impairment and peripheral nerve damage can result from tightness of the cast applied to an extremity. The client needs to be taught to assess for adequate circulation, including the ability to move the area distal to the casted extremity.
***References:*** Ignatavicius, Workman, Rebar (2018), p.1039.

❖ **10.** An adult client who experienced a fractured left tibia has a long leg cast and is using crutches to ambulate. In caring for the client, the nurse assesses for which sign/symptom that indicates a complication associated with crutch walking?

1. Left leg discomfort
2. Weak biceps brachii
3. Triceps muscle spasms
4. Forearm muscle weakness

***Level of Cognitive Ability:*** Analyzing
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Recognize cues
***Integrated Process:*** Nursing Process/Assessment
***Content Area:*** Skills: Activity/Mobility
***Health Problems:*** Adult Health: Musculoskeletal: Skeletal Injury
***Priority Concepts:*** Clinical Judgment; Mobility

***Answer:*** 4
***Rationale:*** Forearm muscle weakness is a sign of radial nerve injury caused by crutch pressure on the axillae. When a client lacks upper body strength, especially in the flexor and extensor muscles of the arms, he or she frequently allows weight to rest on the axillae and on the crutch pads instead of using the arms for support while ambulating with crutches. Leg discomfort is expected as a result of the injury. Weak biceps brachii is not a complication of crutch walking but rather caused by an injury to the brachial plexus itself. Triceps muscle spasms may occur as a result of increased muscle use but is not a complication of crutch walking.
***Test-Taking Strategy:*** Focus on the **subject**, a complication of crutch walking. When asked about a complication of the use of crutches, think about nerve injury caused by crutch pressure on the axillae. This will direct you to option 4.
***Priority Nursing Tip:*** To prevent pressure on the axillary nerve from the use of crutches, there should be two to three finger breadths between the axilla and the top of the crutch when the crutch tip is at least 6 inches diagonally in the front of the foot. The crutch is adjusted so that the elbow is flexed no more than 30 degrees when the palm is on the handle.
***References:*** Ignatavicius, Workman, Rebar (2018), p. 1044.

**11.** A client diagnosed with myasthenia gravis is experiencing prolonged periods of weakness, and the primary health care provider prescribes an edrophonium test, also known as a Tensilon test. A test dose is administered and the client becomes weaker. How should the nurse interpret these results?

1. Myasthenic crisis is present.
2. Cholinergic crisis is present.
3. This result is a normal finding.
4. This result is a positive finding.

***Level of Cognitive Ability:*** Analyzing
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Analyze cues
***Integrated Process:*** Nursing Process/Analysis
***Content Area:*** Foundations of Care: Diagnostic Tests
***Health Problems:*** Adult Health: Neurological: Myasthenia Gravis
***Priority Concepts:*** Clinical Judgment; Functional Ability

***Answer:*** **2**
***Rationale:*** An edrophonium test may be performed to determine whether increasing weakness in a client with previously diagnosed myasthenic is a result of cholinergic crisis (overmedication) with anticholinesterase medications or myasthenic crisis (undermedication). Worsening of the symptoms after the test dose of medication is administered indicates a cholinergic crisis.
***Test-Taking Strategy:*** Focus on the **subject**, a client who becomes weaker after edrophonium is administered. Recalling that edrophonium is a short-acting anticholinesterase and that the treatment for myasthenia gravis includes administration of an anticholinesterase will assist in answering the question. If the client's symptoms worsen after administration of edrophonium, then the client is likely experiencing overmedication.
***Priority Nursing Tip:*** Although rare, the edrophonium test, also known as the Tensilon test, can cause ventricular fibrillation and cardiac arrest. Atropine sulfate is the antidote for edrophonium and should be available when the test is performed in case these complications occur.
***References:*** Ignatavicius, Workman, Rebar (2018), pp, 918–919.

❖ **12.** When tranylcypromine is prescribed for a client, which food items would the nurse instruct the client to avoid? **Select all that apply.**

- ❑ 1. Figs
- ❑ 2. Apples
- ❑ 3. Bananas
- ❑ 4. Broccoli
- ❑ 5. Sauerkraut
- ❑ 6. Baked chicken

***Level of Cognitive Ability:*** Applying
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Take action
***Integrated Process:*** Teaching and Learning
***Content Area:*** Pharmacology: Psychotherapeutics: Monoamine Oxidase Inhibitors (MAOIs)
***Health Problems:*** Mental Health: Mood Disorders
***Priority Concepts:*** Client Education; Safety

***Answer:*** **1, 3, 5**
***Rationale:*** Tranylcypromine is a monoamine oxidase inhibitor (MAOI) used to treat depression. Foods that contain tyramine need to be avoided because of the risk of hypertensive crisis associated with use of this medication. Foods to avoid include figs; bananas; sauerkraut; avocados; soybeans; meats or fish that are fermented, smoked, or otherwise aged; some cheeses; yeast extract; and some beers and wine.
***Test-Taking Strategy:*** Focus on the **subject**, foods to avoid with an MAOI. Focus on the name of the medication and recall that tranylcypromine is an MAOI. Next, recall the foods that contain tyramine to answer the question. Remember that figs, bananas, and sauerkraut are high in tyramine.
***Priority Nursing Tip:*** Hypertensive crisis is characterized by an extreme increase in blood pressure resulting in an increased risk for stroke, headache, anxiety, and shortness of breath.
***References:*** Lilley et al. (2020) p. 260.

**13.** The nurse notes an isolated premature ventricular contraction (PVC) on the cardiac monitor of a client recovering from anesthesia. Which action would the nurse take?

1. Prepare for defibrillation.
2. Continue to monitor the rhythm.
3. Prepare to administer a beta-blocker.
4. Notify the primary health care provider immediately.

***Level of Cognitive Ability:*** Applying
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Take action
***Integrated Process:*** Nursing Process/Implementation
***Content Area:*** Adult Health: Cardiovascular
***Health Problems:*** Adult Health: Cardiovascular: Dysrhythmias
***Priority Concepts:*** Clinical Judgment; Perfusion

***Answer:*** **2**
***Rationale:*** As an isolated occurrence, the PVC is not life-threatening. In this situation, the nurse should continue to monitor the client. Frequent PVCs, however, may be precursors of more life-threatening rhythms, such as ventricular tachycardia and ventricular fibrillation. If this occurs, the primary health care provider needs to be notified. Defibrillation is done to treat ventricular fibrillation. A beta-blocker may be prescribed to treat frequent PVCs but are not prescribed to treat an isolated occurrence.
***Test-Taking Strategy:*** Focus on the **subject**, the action to take for an isolated PVC. Noting the word "isolated" should direct you to the option that addresses continued monitoring.
***Priority Nursing Tip:*** Ventricular tachycardia can progress to ventricular fibrillation, a life-threatening condition.
***References:*** Ignatavicius, Workman, Rebar (2018), pp. 683–684.

❖ **14.** The clinic nurse prepares to assess a client who is in the second trimester of pregnancy. When measuring the fundal height, what should the nurse expect to note with this measurement regarding gestational age?

1. It is less than gestational age.
2. It correlates with gestational age.
3. It is greater than gestational age.
4. It has no correlation with gestational age.

***Level of Cognitive Ability:*** Applying
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Recognize Cues
***Integrated Process:*** Nursing Process/Assessment
***Content Area:*** Maternity: Antepartum
***Health Problems:*** N/A
***Priority Concepts:*** Clinical Judgment; Reproduction

***Answer:*** **2**
***Rationale:*** Until the third trimester, the measurement of fundal height will, on average, correlate with the gestational age. Therefore, options 1, 3, and 4 are incorrect.
***Test-Taking Strategy:*** Focus on the **subject**, fundal height in the second trimester. Recall the correlation of fundal height and gestational age to direct you to the correct option.
***Priority Nursing Tip:*** Usually a paper tape is used to measure fundal height. Consistency in performing the measurement technique is important to ensure reliability in the findings. If possible, the same person should examine the pregnant woman at each of her prenatal visits.
***References:*** McKinney et al. (2018), p, 229.

**15.** A pregnant client tells the nurse that she felt wetness on her peripad and found some clear fluid. The nurse inspects the perineum and notes the presence of the umbilical cord. What is the **immediate** nursing action?

1. Monitor the fetal heart rate.
2. Notify the primary health care provider.
3. Transfer the client to the delivery room.
4. Place the client in the Trendelenburg position.

***Level of Cognitive Ability:*** Applying
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Take action
***Integrated Process:*** Nursing Process/Implementation
***Content Area:*** Maternity: Intrapartum
***Health Problems:*** Maternity: Prolapsed Umbilical Cord
***Priority Concepts:*** Clinical Judgment; Reproduction

***Answer:*** **4**
***Rationale:*** On inspection of the perineum, if the umbilical cord is noted, the nurse immediately places the client in the Trendelenburg position while gently holding the presenting part upward to relieve the cord compression. This position is maintained and the primary health care provider is notified. The fetal heart rate also needs to be monitored to assess for fetal distress. The client is transferred to the delivery room when prescribed by the primary health care provider.
***Test-Taking Strategy:*** Note the **strategic word**, *immediate*, which indicates the immediate action on the nurse's part to prevent or relieve cord compression. The only action that will achieve this is option 4.
***Priority Nursing Tip:*** Relieving cord compression is the priority goal if the umbilical cord is protruding from the vagina. The nurse never attempts to push the cord back into the vagina.
***References:*** McKinney et al. (2018), pp. 593–594.

❖ **16.** On assessment of a newborn being admitted to the nursery, the nurse palpates the anterior fontanel and notes that it feels soft. The nurse determines that this finding indicates which condition?

1. Dehydration
2. A normal finding
3. Increased intracranial pressure
4. Postterm by at least 2 weeks

***Level of Cognitive Ability:*** Analyzing
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Analyze cues
***Integrated Process:*** Nursing Process/Assessment
***Content Area:*** Maternity: Newborn
***Health Problems:*** N/A
***Priority Concepts:*** Clinical Judgment; Development

***Answer:*** **2**

***Rationale:*** The anterior fontanel is normally 2 to 3 cm in width, 3 to 4 cm in length, and diamond-like in shape. It can be described as soft, which is normal, or full and bulging, which could indicate increased intracranial pressure. Conversely a depressed fontanel could mean that the infant is dehydrated. The condition of the anterior fontanel is not generally influenced by a postterm delivery.

***Test-Taking Strategy:*** Focus on the **subject**, an anterior fontanel that is soft. Recalling the normal physiological findings in the newborn will direct you to the correct option.

***Priority Nursing Tip:*** The anterior fontanel is a diamond-shaped area where the frontal and parietal bones meet. It closes between 12 and 18 months of age. Vigorous crying may cause the fontanel to bulge, which is a normal finding.

***References:*** Hockenberry, Wilson, Rogers (2017). pp. 198–199.

**17.** A client admitted to the hospital with a diagnosis of *Pneumocystis jiroveci* pneumonia is prescribed intravenous (IV) pentamidine. What intervention would the nurse plan to implement to safely administer the medication?

1. Infuse over 1 hour and allow the client to ambulate.
2. Infuse over 1 hour with the client in a supine position.
3. Administer over 30 minutes with the client in a reclining position.
4. Administer by IV push over 15 minutes with the client in a supine position.

***Level of Cognitive Ability:*** Applying
***Client Needs:*** Physiological Integrity
***Clinical Judgment/Cognitive Skills:*** Generate solutions
***Integrated Process:*** Nursing Process/Planning
***Content Area:*** Pharmacology: Immune: Antifungals
***Health Problems:*** Adult Health: Respiratory: Pneumonia
***Priority Concepts:*** Clinical Judgment; Safety

***Answer:*** **2**

***Rationale:*** IV pentamidine is an antifungal medication infused over 1 hour with the client supine to minimize severe hypotension and dysrhythmias. Options 1, 3, and 4 are inaccurate in either the length of time that pentamidine is administered or the client's position.

***Test-Taking Strategy:*** Focus on the **subject**, the procedure for administering pentamidine. Eliminate options 3 and 4 first because these time frames are too short for safe administration of this IV medication. From the remaining options, recalling that the medication causes hypotension will direct you to option 2, which addresses both the supine position and the longest time of administration.

***Priority Nursing Tip:*** During the administration of IV pentamidine, the client should remain supine and the nurse should monitor the blood pressure for hypotension and the cardiac pattern for dysrhythmias.

***References:*** Gahart,Nazareno, Ortega (2019), pp. 1053–1054.