

Solutions Manual for Complete Textbook of Phlebotomy 6th Hoeltke

Solution and Answer Guide

HOELTKE, THE COMPLETE TEXTBOOK OF PHLEBOTOMY 6E, 9780357932797; CHAPTER 1:
INTRODUCTION TO PHLEBOTOMY

TABLE OF CONTENTS

Concept Checks	1
Concept Check 1: Areas of a Hospital	1
Concept Check 2: Areas of Nursing and Type of Care	2
Concept Check 3: Abbreviations and Certifications	3
Concept Check 4: Abbreviations and Certifications	4
Concept Check 5: Panels and Tests	4
Concept Check 6: Requisition.....	5
Review Questions	6
Critical Thinking Questions.....	8

CONCEPT CHECKS

CONCEPT CHECK 1: AREAS OF A HOSPITAL

Directions: Match the ancillary areas of a hospital to their purpose.

Purpose

1. _____ Maintains patient records
2. _____ Uses imaging for diagnosis and treatment
3. _____ Provides therapy to evaluate the lungs
4. _____ Diagnoses neurophysiological disorders
5. _____ Monitors patients with cardiovascular disease
6. _____ Provides diets to patients
7. _____ Provides therapy to help maintain living skills
8. _____ Provides testing of patient blood and body fluid samples
9. _____ Provides therapy to restore mobility
10. _____ Dispenses drugs and advises on drug usage
11. _____ Provides therapy to restore speech
12. _____ Provides direct patient care

Area of hospital

- A. Electrocardiography (EKG)
- B. Electroencephalography (EEG)
- C. Food Service (Dietary)

- D. Laboratory
- E. Medical Records
- F. Nursing
- G. Occupational Therapy
- H. Pharmacy
- I. Physical Therapy
- J. Radiology
- K. Respiratory Therapy
- L. Speech Therapy

Answer:

- 1. E
- 2. J
- 3. K
- 4. B
- 5. A
- 6. C
- 7. G
- 8. D
- 9. I
- 10. H
- 11. L
- 12. F

CONCEPT CHECK 2: AREAS OF NURSING AND TYPE OF CARE

Directions: Identify the correct department of the hospital or nursing specialty.

Type of Care

- 1. _____ Care of an older patient.
- 2. _____ Care of a newborn baby.
- 3. _____ The unit taking care of a patient who is on dialysis.
- 4. _____ The area where a pregnant person goes to have a baby.
- 5. _____ A very ill 5-year-old child will be cared for by this area of nursing.
- 6. _____ A patient coming out of surgery will see this specialty of nursing.
- 7. _____ A patient has a heart attack and is admitted to the hospital. This nursing specialty is caring for the patient.
- 8. _____ After a serious car crash the paramedics will take the patient to this area of the hospital first.
- 9. _____ This type of nurse will come to the house to check on the patient's condition after a hospital stay.
- 10. _____ The area of nursing that will care for a cancer patient.
- 11. _____ This specialty of nursing will care for a patient that needs increased care due to critical need.
- 12. _____ This specialty will care for a patient with broken bones.

Area of Nursing

- A. Coronary Care Unit (CCU)
- B. Emergency Department
- C. Geriatric
- D. Home Health Care

- E. Intensive Care Unit (ICU)
- F. Neonatal
- G. Nephrology
- H. Obstetrics
- I. Oncology
- J. Orthopedic
- K. Pediatric
- L. Recovery

Answer:

- 1. C
- 2. F
- 3. G
- 4. H
- 5. K
- 6. L
- 7. A
- 8. B
- 9. D
- 10. I
- 11. E
- 12. J

CONCEPT CHECK 3: ABBREVIATIONS AND CERTIFICATIONS

Directions: List the certification abbreviations for the following laboratory staff according to the American Society for Clinical Pathology.

- 1. _____ Phlebotomy technician
- 2. _____ Cytotechnologist
- 3. _____ Medical laboratory scientist
- 4. _____ Clinical laboratory scientist
- 5. _____ Medical laboratory technician
- 6. _____ Histotechnologist

- A. MLS
- B. CLS
- C. HT
- D. CT
- E. PBT
- F. MLT

Answer:

- 1. E
- 2. D
- 3. A
- 4. B
- 5. F
- 6. C

CONCEPT CHECK 4: ABBREVIATIONS AND CERTIFICATIONS

Directions: Match the abbreviations with the correct regulatory agency.

Regulatory Agency

1. _____ College of American Pathologists
2. _____ Clinical Laboratory Standards Institute
3. _____ Clinical Laboratory Improvement Act
4. _____ National Accrediting Agency for Clinical Laboratory Sciences
5. _____ Occupational Safety and Health Administration

Abbreviation

- A. CLIA
- B. OSHA
- C. CLSI
- D. NACCLS
- E. CAP

Answer:

1. E
2. C
3. A
4. D
5. B

CONCEPT CHECK 5: PANELS AND TESTS

Directions: For questions 1–4, match the correct panel with the test included. For question 5, select all the correct answers.

- A. Electrolyte panel
 - B. CBC (complete blood count)
 - C. Basic metabolic panel (BMP)
 - D. Comprehensive metabolic panel (CMP)
1. _____ This test will include leukocyte count, erythrocyte count, hematocrit, hemoglobin, and platelet count.
 2. _____ This test includes the analytes: sodium, potassium, chloride, and carbon dioxide.
 3. _____ If a physician wants to test a patient's sodium, potassium, chloride, carbon dioxide, glucose, blood urea nitrogen (BUN), and creatinine, the physician would order this test.
 4. _____ This test panel contains 14 tests within the panel.
 5. _____ Which of the following are not included in the patient rights? Select all that apply.
 - a. The patient has the right to considerate and respectful care.
 - b. The patient's information becomes public domain when entering the hospital.
 - c. The patient has the right to refuse treatment.
 - d. The patient has the right to know the identity of people involved in their care.
 - e. The patient's living will is no longer valid upon entering a hospital.

Answer:

1. B
2. A
3. C
4. D
5. b & e

CONCEPT CHECK 6: REQUISITION

You have just collected the tests described below. From the following choices, which departments in the laboratory will you take them to?

Hometown Hospital USA 125 Goodcare Avenue Small Town, USA		
Laboratory Requisition		
Clinic or room number: <u>3415</u>	Sample Collection	
Physician Name: <u>Good, Olivia</u>	Date: <u>xx/xx/xxxx</u>	Patient Name: <u>Goodpatient, Samuel</u>
Diagnosis code: <u>748.22</u>	Time: <u>1030</u>	MRN: <u>123456</u>
	Initials: <u>ss</u>	DOB: <u>12/22/1967</u>
		Sex: <u>M</u>
Special Instructions:		
☐ Basic metabolic panel	☐ CBC without diff	☒ Culture, urine
☐ Electrolyte panel	☒ CBC with diff	☐ Culture, throat
☒ Hepatic function panel	☐ Reticulocyte count	☐ Culture, stool
☐ Comprehensive panel	☐ Sedimentation rate, ESR	☐ Ova and parasite, stool
☒ Ethanol	☐ Sick cell screen	
☒ Acetaminophen	☐ Protime, PT	
☐ Salicylate	☐ APTT	☐ Syphilis RPR screen
☐ Glucose, fasting		☐ Mononucleosis screen
☐ Glucose tol. <u> </u> hr		☐ ANA screen
☐ Hgb A1C	☐ Urinalysis	☐ Rheumatoid factor screen
	☐ Urine protein	
Other Tests	☐ UUN, urea nitrogen	
	☐ Urine electrolytes	☐ ABO
	☐ Creat. Clearance (24 hrs)	☐ Rh
	☐ Urine TOX screen	☐ Antibody screen
		☐ Type and cross-match

- A. Immunology, Hematology, Cytology
- B. Chemistry, Coagulation, Urinalysis
- C. Chemistry, Hematology, Microbiology
- D. Chemistry, Hematology, Urinalysis

Answer:

- C. Chemistry, Hematology, Microbiology

REVIEW QUESTIONS

1. Phlebotomists are an important part of the health care team because
 - a. they represent the laboratory and the institution.
 - b. they are in direct contact with the patient.
 - c. they perform tasks that are critical to the patient's diagnosis.
 - d. all of these

Answer: d

2. Phlebotomists often have many duties and tasks. Which of the following is the primary duty?
 - a. sample processing
 - b. sample accession
 - c. collecting venous blood samples
 - d. collecting arterial blood samples

Answer: c

3. Which laboratory employee has the most education and acts as a consultant to other physicians?
 - a. pathologist
 - b. medical laboratory scientist (MLS)
 - c. medical laboratory technician (MLT)
 - d. clinical laboratory assistant (CLA)

Answer: a

4. When a patient refuses to have blood drawn, the phlebotomist should do all of the following *except*
 - a. contact the patient's nurse or physician.
 - b. return the requisition to the laboratory.
 - c. force the patient to have blood drawn.
 - d. try to convince the patient to have blood drawn.

Answer: c

5. The most common source of laboratory error is
 - a. bacterial.
 - b. chemical.
 - c. administrative.
 - d. technical.

Answer: c

6. What laboratory department tests a Pap test?
 - a. chemistry
 - b. cytology
 - c. immunology
 - d. microbiology

Answer: b

7. What hospital department cares for newborn infants?

- a. oncology
- b. orthopedic
- c. nephrology
- d. neonatal

Answer: d

8. What hospital department cares for patients with cancer?

- a. oncology
- b. orthopedic
- c. nephrology
- d. neonatal

Answer: a

9. Where in a hospital would you find a patient with broken bones?

- a. orthopedic
- b. obstetrics
- c. nephrology
- d. neonatal

Answer: a

10. Which of the following is *not* a preexamination variable of sample collection?

- a. patient identification
- b. sample transport
- c. skin preparation (cleansing)
- d. sample testing

Answer: d

11. What laboratory department tests a routine urine sample?

- a. chemistry
- b. cytology
- c. urinalysis
- d. microbiology

Answer: c

12. Perhaps the single most important step in phlebotomy, and often where an error occurs, is

- a. cleansing the site.
- b. patient identification.
- c. using a clean needle.
- d. using the proper evacuated tube.

Answer: d

13. An unexpected occurrence involving death or serious physical or psychological injury is a

- a. root cause.
- b. esoteric event.
- c. sentinel event.
- d. threshold event.

Answer: c

14. What hospital department performs dialysis for patients?
- oncology
 - orthopedic
 - nephrology
 - neonatal

Answer: c

15. A Patient Care Partnership explains what patient rights on the patient's behalf?
- The patient must give informed consent for venipuncture.
 - The patient has the right to refuse treatment.
 - The patient has the right to privacy of their health information.
 - All of these

Answer: d

16. An advance directive specifies
- how the patient will pay the bill.
 - how the patient is to be treated if they cannot speak for themselves.
 - where the phlebotomist can do a venipuncture.
 - how the physician can treat the patient.

Answer: b

CRITICAL THINKING QUESTIONS

1. What would you do if a patient wanted you to show them their test results?

Answer: Answers may vary. The patient has the right to know about their medical care and can look at their records. If the patient asks the phlebotomist to look at the chart, this request should be referred to the nurse or physician.

2. A terminally ill patient you are ready to collect blood from says, "I don't want my blood drawn. I'm just going to die anyway." How would you handle this situation?

Answer: Answers may vary. Dealing with a terminally ill patient's refusal for a blood draw necessitates sensitivity, empathy, and honoring their autonomy. Start with empathetic communication, expressing understanding and respect for their feelings. To help you understand their concerns, ask for reasons behind their refusal. Educate the patient on the importance of the blood draw and its potential benefits. Maintain a professional attitude.

Instructor Manual

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TABLE OF CONTENTS

Purpose and Perspective of the Chapter	2
Chapter Objectives	2
What's New in This Chapter.....	2
Chapter Outline.....	3
Additional Activities and Assignments.....	5
In-Class Discussion.....	5
Additional Resources.....	5
Primary Sources.....	5
Competency Assessments	6

PURPOSE AND PERSPECTIVE OF THE CHAPTER

The purpose of this chapter is to provide the basic information that is needed before one can perform phlebotomy. It outlines the duties of the people who will be working with the phlebotomist both in the laboratory and in a health care facility. The student will gain familiarity with the departments of the laboratory and the testing that is performed in each department. The student will also better understand the agencies that regulate how health care facilities must operate.

CHAPTER OBJECTIVES

The following objectives are addressed in this chapter:

1. Identify members of the laboratory staff.
2. Describe the duties of laboratory staff members and their education path.
3. Outline the phlebotomist's responsibilities as a member of the health care team.
4. Describe what it means to be a professional as a phlebotomist.
5. Identify departments in the laboratory and explain their function.
6. Identify departments within the hospital and explain their function.
7. Identify each section of the laboratory and give examples of tests that would be performed in that section.
8. Describe the importance of communication and maintaining quality care within the laboratory and with other departments of the hospital.
9. List five patient rights and explain how these patient rights would affect a phlebotomist's job.
10. Explain advance directives and how they can direct a patient's care.
11. Describe the standards and agencies that govern laboratory practice.

[\[return to top\]](#)

WHAT'S NEW IN THIS CHAPTER

The following elements are improvements in this chapter from the previous edition:

- Expanded discussion of areas in the hospital

[\[return to top\]](#)

CHAPTER OUTLINE

The following outline organizes activities (including any existing discussion questions in PowerPoints or other supplements) and assessments by chapter (and therefore by topic), so that you can see how all the content relates to the topics covered in the text.

- I. Phlebotomy's Role In Health Care (PPT Slides 2–10; LO 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7)
 - a. Phlebotomists in the Hospital Setting
 - i. Definition of the phlebotomist's task
 - ii. Differences between centralized and decentralized phlebotomy
 - b. Areas of the Hospital and Health Care Settings
 - i. Explanation of the different departments in the hospital
 - ii. Nursing is the largest department interacting with phlebotomists
 - iii. Chart of the hospital departments with definitions
 - c. Laboratory Sections
 - i. Laboratory sections and their purposes
 - ii. Types of tests performed in the laboratory
 - d. Three Phases of Sample Testing
 - i. Preexamination
 - ii. Examination
 - iii. Postexamination

Activity: Concept Check 1: Areas of the Hospital

Concept Check 2: Area of Nursing and Type of Care

- II. The U.S. Health Care System and Laboratories in the Twenty-First Century (PPT Slides 10–12; LO 1.8)
 - a. Managed care a complex system to coordinate the provision of health care services
 - b. Health maintenance organizations formed to provide health coverage for both hospital and physician services
 - c. Explanation of point of care testing
 - d. Differences in types of laboratories
 - i. Hospital laboratories
 - ii. Regional laboratories
- III. Laboratory Staff (PPT Slides 13; LO 1.8)
 - a. Laboratory Staff Roles
 - i. Education requirements for phlebotomists

- ii. List and explain the members of the laboratory staff
 - iii. Organizational chart/chain of command
- b. Certification for Laboratory Staff
 - i. Medical Laboratory Scientist (Medical Technologist)
 - ii. Medical Laboratory Technician
 - iii. Phlebotomist

Activity: Concept Check 3: Abbreviations and Certifications

- IV. The Patient Care Partnership (PPT Slides 14–16, LO 1.9, 1.10)
 - a. Patient's Bill of Rights
 - i. Drafted in 1973
 - ii. Revised in 1992
 - iii. Replaced with Patient Care Partnership in 2003
 - b. Patient Rights
 - i. The 12 patient rights defined
 - ii. Rights and responsibilities required of phlebotomists
 - c. Professional Attitude
 - i. Attitude
 - ii. Professional grooming
 - iii. Dress code restrictions
 - d. Advance Directives
 - i. Living wills
 - ii. Power of attorney
- V. Standard Used in the Laboratory (PPT Slides 17–18; LO 1.11)
 - a. Regulatory agencies
 - i. The Joint Commission
 - ii. College of American Pathologists
 - iii. National Accrediting Agency for Clinical Laboratory Sciences
 - iv. Clinical Laboratory Standards Institute
 - v. Clinical Laboratory Improvement Act of 1988
 - vi. Occupational Safety and Health Administration
 - b. College of American Pathologists
 - c. State Board of Health
 - d. Clinical Laboratory Standards Institute
 - e. Clinical Laboratory Improvement Act
 - i. Waived tests
 - ii. Physician-performed microscopy tests
 - iii. Moderate-complexity tests
 - iv. High-complexity tests
 - f. National Accrediting Agency for Clinical Laboratory Sciences

c. **Activity:** Concept Check 4. Abbreviations and Certifications

VI. Quality Assurance in Phlebotomy (PPT Slide 17; LO 2.7)

- a. Joint Commission's 10 steps to a quality assurance plan
- b. Seven phlebotomist quality improvement areas
- c. Six Sigma Lean
 - i. Helps develop workflow programs for laboratory operation
 - ii. Helps identify and improve quality
- d. Quality Assurance and Quality Control
 - i. Quality assurance standards for phlebotomists
 - ii. Quality improvement

c. **Activity:** Concept Check 5. Panels and Tests

Concept Check 6: Requisition

[\[return to top\]](#)

ADDITIONAL ACTIVITIES AND ASSIGNMENTS

Discuss the critical thinking questions at the end of the chapter. Divide the students into two groups, with each group covering one of the two questions. After 15 minutes, bring the class back together and have each group share their thoughts on the subject.

IN-CLASS DISCUSSION

1. What would you do if a patient wanted you to show them their test results?
2. A terminally ill patient you are ready to collect blood from says, "I don't want my blood drawn. I'm just going to die anyway." How would you handle this situation?

[\[return to top\]](#)

ADDITIONAL RESOURCES

PRIMARY SOURCES

- **Clinical Laboratory Improvement Act (CLIA) of 1988, Personnel requirements**
- **Healthcare-associated infections (HAIs)**

COMPETENCY ASSESSMENTS

These competencies follow the procedures in the textbook to help the instructor observe and verify that the student understands the details of each procedure. Competency in this context includes how the phlebotomist performs their required tasks with a diverse group of patients. The ultimate goal is to have the phlebotomist competent in all phlebotomy procedures for all age groups of patients. This will standardize the training so the phlebotomist will feel comfortable working at different sites throughout different laboratories.

- Age-Specific Competencies
- Bleeding Time Test
- Blood Culture Butterfly Collection
- Capillary Skin Puncture Collection
- Gestational Screen Collection
- Glucose Tolerance 2-Hour Two-Sample Collection
- Metabolic Screen Neonatal Filter Paper Collection
- Pediatric Bagged Urine Collection
- Sample Preparation and Transport
- Syringe Blood Collection
- Throat Culture Collection
- Venipuncture Collection with a Butterfly Needle
- Venipuncture Collection with an Evacuated Tube System

[\[return to top\]](#)