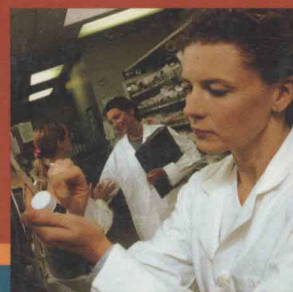
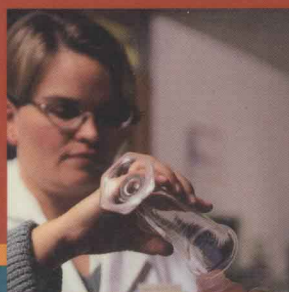
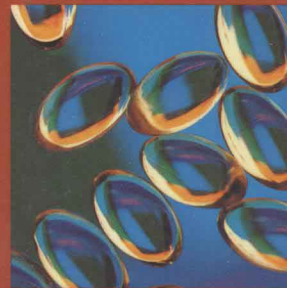
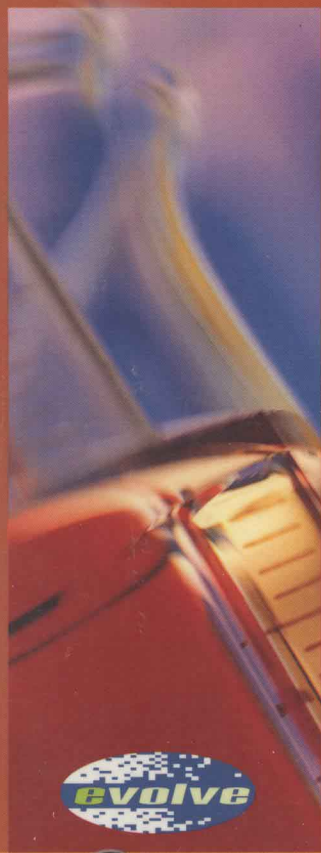


WORKBOOK to accompany Mosby's Pharmacy Technician

PRINCIPLES & PRACTICE



HOPPER, MCBRIDE & SNIPE

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to accompany **Mosby's**
Pharmacy
Technician
PRINCIPLES AND PRACTICE

TERESA HOPPER, BS, CPhT

Pharmacy Technician Consultant

LAURA MCBRIDE, CPhT

International Education Corporation
Irvine, California

KAREN SNIPE, CPhT, AS, BA, MAEd

Pharmacy Technician Program Coordinator
Trident Technical College
Charleston, South Carolina

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WORKBOOK TO ACCOMPANY MOSBY'S
PHARMACY TECHNICIAN PRINCIPLES
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Introduction

This student workbook is designed to help you master the information and skills presented in your textbook: *Mosby's Pharmacy Technician Principles and Practice*. The various types of exercises will challenge your knowledge, help further reinforce key content, and allow you to gauge your understanding of the subject matter you have studied in the respective chapters of your textbook. The following list explains the types of exercises contained in this student workbook:

- *Terms and Definitions:* Terms and definitions are listed, preceded by a letter. You are to read each statement following the list, and write in the letter that represents the correct response. This exercise aids you in recalling the many terms that are introduced to you in each chapter. Your textbook conveniently lists this information at the beginning of each chapter. If you find you are not sure of any of your responses, you can easily turn to the appropriate chapter to refresh your memory.
- *Fill in the Blanks:* Complete each statement by filling in the blanks. This exercise gives you the opportunity to specifically apply the vocabulary you have learned within the context of pharmacy.
- *True or False:* Test your knowledge of the validity of the statements. If you think a statement is true, write a "T" in the blank preceding the statement; if you believe it is a false statement, write in an "F." Completing these exercises helps you immediately to recognize content of which you are unsure. You can then review and strengthen your understanding of the material by rereading that particular section in your textbook.
- *Multiple Choice:* You are to select the one best answer to complete the numbered questions by circling the letter preceding the answer you have selected. This is the type of question in which your first response is usually the correct reply. If you are not sure, then you can easily review the subject in question.
- *Body System Practice:* Each chapter devoted to a body system features an illustration of the system with its organs numbered. You are asked to identify the organs contained in the body system. This visual exercise helps further reinforce your knowledge of anatomy. Questions in these chapters test you on the anatomy and physiology of the system, diseases and conditions that may occur within this system, and the medications prescribed to treat such illnesses.
- *Matching:* These exercises provide you with essential practice in matching controlled substance drug schedules with given drug names. Ease of recognition is essential in your chosen profession. If you are not sure of some of your responses, you can then refer back to your textbook for further study.
- *Lab Sheets:* Lab Sheets for specific chapters will help you master such skills as gram staining, interpreting abbreviations, performing conversions and calculations, and loading patient medication drawers. These exercises offer you opportunities for hands-on reinforcement of what you have learned in your textbook.
- *Conversion and Calculation:* These questions require you to convert measurements, thereby applying what you have learned.
- *Research Activities:* You are asked to use the Internet as a research tool to assist you in locating essential information. Featured websites address such topics as the scope of practice for pharmacy technicians and where to find information on controlled substances and recalls.
- *Critical Thinking:* This exercise tests your accumulated knowledge of each chapter by giving you some scenarios to solve. You are asked to draw upon your knowledge of pharmacy and direct it to specific situations. This is a good test of your understanding of key concepts. If any of these questions stump you, refer back to your textbook for further study, or ask your instructor for clarification.

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Evolve Student Learning Resources for Hopper: Workbook to accompany Mosby's Pharmacy Technician Principles and Practice offer the following features:

- **Content Updates**

The latest content updates from the author of the textbook to keep you current with recent developments in the field of pharmacy technician.

- **Chapter Weblinks**

These links offer you the opportunity to check your understanding and execute the workbook web-based research assignments, plus expand your knowledge base and stay current with this ever-changing industry.

- **Internet Research Activities**

Internet research activities for each chapter are set up to direct students toward pharmacy-specific websites.

Think outside the book...evolve.

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History of Medicine and Pharmacy

Terms and Definitions

Select the correct term from the following list and write the corresponding letter in the blank next to the statement.

- A. Apothecary
- B. Dogma
- C. Inpatient pharmacy
- D. Outpatient pharmacy
- E. Pharmacist
- F. Pharmacy clerk
- G. Pharmacy technician
- H. Shaman

- _____ 1. Code of beliefs based on tradition rather than fact
- _____ 2. Community pharmacies or outpatient hospital settings
- _____ 3. Person who dispenses drugs, counsels patients
- _____ 4. Person who assists the pharmacist at the front counter
- _____ 5. Latin term for pharmacist
- _____ 6. A pharmacy in a hospital or institutional setting
- _____ 7. Medicine person who holds a high place of honor in a tribe
- _____ 8. Person who assists the pharmacist by filling prescriptions and performing other nondispensing tasks

Important People Who Have Influenced the History of Medicine

Select the correct name from the following list and write the corresponding letter in the blank next to the description.

- A. Aristotle
- B. Aesculapius
- C. Galen
- D. Hippocrates
- E. Roger Bacon
- F. Gregor Mendel

- _____ 1. Scientist and monk, known as the Father of Genetics
- _____ 2. God of medicine in Greek mythology
- _____ 3. Greek physician and scientist
- _____ 4. Greek philosopher, considered to be the Father of Medicine
- _____ 5. English scientist responsible for scientific methods
- _____ 6. Greek physician who proved that blood flowed through arteries

Multiple Choice

Complete each question by circling the best answer.

- 1. The placebo effect
 - A. Works from the outside of the body to the inside
 - B. Works by placing the drug over the area to be treated
 - C. Works because the patient strongly believes it will work
 - D. Works only after midnight
- 2. Trephining is
 - A. A radical treatment that lasted for hundreds of years
 - B. A term used to describe menstrual bleeding
 - C. Draining the poisonous blood from the sick person
 - D. An incision into the skull to create an exit portal for disease
- 3. In early America, doctors were
 - A. Responsible for diagnosing conditions
 - B. Responsible for preparing the necessary remedy
 - C. The first druggists
 - D. All of the above
- 4. The division between physicians and pharmacists began after the
 - A. Korean War
 - B. Civil War
 - C. Vietnam War
 - D. Cold War

5. Cisterns were
 - A. Jars used to store medicinal ingredients
 - B. A special knife used for removing cysts
 - C. A folk name for girls in the same family
 - D. A recipe book for ailments
6. In the 1800s a typical remedy for an earache was to
 - A. Drink a hot toddy and go to bed
 - B. Blow tobacco smoke into the ear
 - C. Rub the ear with an onion in the morning and at night before bed until the ear becomes red
 - D. Pour a tablespoonful of molasses in the ear
7. The first pharmacy technicians were
 - A. College students
 - B. High school graduates
 - C. Family members of the pharmacist
 - D. Certified pharmacy technicians (CPhTs)
8. In early years the typical pharmacist was a person who
 - A. Wore a white jacket
 - B. Worked the soda machine
 - C. Packaged up the medications
 - D. All of the above
9. In some states, today's typical pharmacy technician
 - A. Is required to do an array of tasks
 - B. Is required to be educated and an OJT
 - C. Is a family member of the pharmacist
 - D. Both A and B
10. In the twenty-first century, technicians have been perceived as
 - A. Taking jobs away from pharmacists
 - B. Increasing the liability of the pharmacy
 - C. Persons who will gain the trust of the patients to whom they provide service
 - D. All of the above
11. The concept that doctors act only for the good of the patient and keep confidential what they learn about their patients reflects the
 - A. Galenic Oath
 - B. Corpus Hippocratum
 - C. Hippocratic Oath
 - D. De Materia Medica
12. The effectiveness of opium and alcohol was surpassed only by its
 - A. Addictiveness
 - B. Availability
 - C. Adverse effects
 - D. All of the above

Fill in the Blanks

1. Technicians help the pharmacists by preparing _____ and _____.
2. Name four duties of technicians in a hospital setting:
 - A. _____
 - B. _____
 - C. _____
 - D. _____
3. Name two areas of pharmacy a pharmacist can specialize in:
 - A. _____
 - B. _____
4. The most important thing a patient can develop for a technician is _____.

Research Activity

1. Access the website www.ptcb.org and investigate the duties outlined for pharmacy technicians.
2. Access the website www.lindsaydrug.com/newhist. List five facts from the account on the history of pharmacy.

Critical Thinking

1. One of the most important aspects of a pharmacy technician's job is to gain the trust of the pharmacist. How would you, as a new technician on the job, go about gaining the trust of the pharmacist?
2. What changes have you seen in pharmacy as a consumer over the years?
3. If you had the chance to write your own job description, what would you write?

Law and Ethics of Pharmacy

Laws and Definitions

Select the correct law from the following list and write the corresponding letter in the blank next to the statement.

- A. 1906 = Federal Food and Drug Act
- B. 1914 = Harrison Narcotic Act
- C. 1938 = Food, Drug and Cosmetic Act
- D. 1951 = Durham-Humphrey Amendment
- E. 1962 = Kefauver-Harris Amendment
- F. 1970 = Comprehensive Drug Abuse and Prevention and Control Act
- G. 1983 = Orphan Drug Act
- H. 1987 = Prescription Drug Marketing Act
- I. 1990 = Anabolic Steroids Control Act
- J. 1990 = Omnibus Budget Reconciliation Act
- K. 1996 = The Health Insurance Portability and Accountability Act

- _____ 1. Required drug companies to include directions for use to the consumer in package inserts on drugs. The markings "Warning: May be habit forming" required for all narcotics
- _____ 2. Attempted to ensure the safety and effectiveness of all new drugs introduced to the market
- _____ 3. Enacted to stop the sale of inaccurately labeled drugs
- _____ 4. This act required the labeling "Caution: Federal law restricts this drug to use by or on the order of a licensed veterinarian"
- _____ 5. States that a pharmacist must counsel all patients who receive new prescriptions at the time of purchase
- _____ 6. Created an agency whose sole purpose was to enforce the laws concerning narcotics and the requirements around their distribution

- _____ 7. This act was put into place because of excessive opium addictions across the United States
- _____ 8. This act deals with a person's right to continuance of his or her health insurance even when changing employers
- _____ 9. Helped stiffen regulations on the abuse problems of anabolic steroids and their misuse in athletes
- _____ 10. Made the initial distinction between a legend drug and over-the-counter drugs, and legend drugs require the labeling "Caution: Federal law prohibits dispensing without a prescription"
- _____ 11. Allowed drug companies to bypass the lengthy time requirements of testing a new drug and the costs that accompany them to provide medications to persons who have a rare disease

True or False

Write T or F next to each statement.

- _____ 1. The FDA is in charge of how advertising is handled.
- _____ 2. Thalidomide, a drug prescribed to help people sleep, caused children to be born without limbs and with severe defects; this was a widespread problem throughout the United States.
- _____ 3. The Orphan Drug Act was passed for diseases that affect fewer than 200,000 persons in the United States.
- _____ 4. All patients must be given information on the drugs that they are taking, such as its name, when to take it, how long to take it, and any side effects or possible interactions.
- _____ 5. Technicians will not be held liable if they do not know all the new and upcoming changes relating to HIPPA.
- _____ 6. Not all controlled substance are addictive.
- _____ 7. The FDA and DEA are both created under the Department of Justice.
- _____ 8. The FDA has a toll-free number for reporting any defect in OTC and legend drugs.
- _____ 9. The strictest law (federal versus state) is the one employees of the pharmacy must follow.
- _____ 10. Not all prescribers must be registered with the DEA to write prescriptions for narcotics.

Multiple Choice

Complete the question by circling the best answer.

- 1. Demerol is what schedule of drug?
 - A. OTC
 - B. C-IV
 - C. C-II
 - D. None of the above

2. A C-III drug can be refilled
 - A. 0 times
 - B. 2 times
 - C. 5 times
 - D. 6 times
3. A prescription for a C-IV drug will expire after
 - A. 14 days
 - B. 3 months
 - C. 6 months
 - D. 12 months
4. A drug monograph is
 - A. A picture of the drug
 - B. Literature on the drug
 - C. Literature on the manufacturer
 - D. A price list for the drug
5. Phone order prescriptions can be received by
 - A. Pharmacy clerks
 - B. Pharmacy interns
 - C. Pharmacy technicians
 - D. Pharmacists
6. Prescriptions for controlled substances are designated with a "C" that must be
 - A. In red in the lower right corner of the prescription
 - B. In black in the lower right corner of the prescription
 - C. In red in the lower left corner of the prescription
 - D. In black in the lower left corner of the prescription
7. Which of the following numbers could be the DEA number for Dr. Green?
 - A. AB5527835
 - B. AG5387255
 - C. AB5387255
 - D. BG5378255
8. Which medication does not require a childproof cap?
 - A. Amoxicillin chewable tablets
 - B. Nitrostat SL tablets
 - C. Mycelex troche
 - D. Amoxicillin suspension
9. The highest level of manufacture recall dealing with products that could cause serious or even fatal harm is a
 - A. Class 1 recall
 - B. Class 2 recall
 - C. Class 3 recall
 - D. Class 4 recall
10. A tort is
 - A. A small fruit pie
 - B. The amount of force used to inject a needle
 - C. A Mexican sandwich
 - D. Causing injury to a person intentionally or because of negligence

11. For a pharmacy to obtain schedule II controlled substances from a distributor, which DEA form must be filled out?
 - A. 122
 - B. 222
 - C. 324
 - D. 306
12. Which of the following controlled substance schedule drugs can be obtained OTC?
 - A. C-II
 - B. C-III
 - C. C-IV
 - D. C-V

Fill in the Blank

1. Which reference text do physicians use to access drug information? _____
2. Recommended dosing is usually specified by _____ and _____.
3. Name three types of practitioners besides physicians who are able to prescribe medications.
 - A. _____
 - B. _____
 - C. _____
4. What are the two components of information needed on a prescription label?
_____ and _____
5. The pharmacy technician's clear responsibility on many levels is the _____.
6. _____ are morals in the workplace.

Matching

Match the following controlled substances with the given drug.

- | | |
|----------------|------------|
| _____ 1. C-II | A. Vicodin |
| _____ 2. C-III | B. LSD |
| _____ 3. C-V | C. Demerol |
| _____ 4. C-I | D. Valium |
| _____ 5. C-IV | E. Lomotil |

Research Activity

1. Access the website www.fda.gov. Find information on controlled substances and recalls.
2. Using the same website, find information on thalidomide and Oxycontin abuse.

Critical Thinking

1. If you could add one more law to the existing laws pertaining to the abuse of prescription medications, what would it be?
2. Marijuana has been the subject of debates lately for possible medicinal use in patients with cancer and AIDS. What controlled substance schedule would you put it in if it were approved for such use?
3. Someone presents a C-II prescription in the pharmacy 31 days after it was written. Knowing that C-II drugs must be filled within 30 days of the original date written, how would you tell the patient that this prescription cannot be filled?

Pharmacy Settings for Technicians

True or False

Write T or F next to each statement.

- _____ 1. Each of the 50 states in America has standardized the qualifications and job descriptions for pharmacy technicians.
- _____ 2. Each state has its own Board of Pharmacy.
- _____ 3. Pharmacy technicians perform nonjudgmental tasks such as counseling patients.
- _____ 4. *Inpatient pharmacy* refers to pharmacy for patients who are in the hospital for an overnight stay or longer.
- _____ 5. All documentation within the inpatient pharmacy is based on a 24-hour cycle.
- _____ 6. Preparing unit-dose medications is an outpatient technician duty.
- _____ 7. It is more important to be fast and concise than to be correct and complete.
- _____ 8. Outpatient pharmacy is one of the most difficult tasks in pharmacy.
- _____ 9. In-home health care technicians process medications usually on a weekly or monthly basis.
- _____ 10. All pharmacy technician jobs are performed in a pharmacy.

Pharmacy Technician Job Opportunities

Select the correct job from the following list and write the corresponding letter in the blank next to the description.

- A. Inventory technician
- B. Robot filler

- C. Chemo technician
- D. Clinical technician
- E. Insurance technician
- F. Technician recruiter
- G. Technician trainer
- H. PBM operator
- I. Computer support technician
- J. Poison Control Call Center operator

- _____ 1. Trains newly hired technicians on computer programs and other skills relevant to their pharmacy
- _____ 2. Interprets orders and prepares all chemotherapeutic agents
- _____ 3. Supports personnel with automated medication dispensing systems
- _____ 4. Knows Medicare, Blue Cross, and other insurance companies' guidelines
- _____ 5. Recruits technicians into their outpatient or temporary agencies
- _____ 6. Orders and bills all stock
- _____ 7. Screens incoming calls and transfers calls to 911 operator or pharmacist or if it is something minor is authorized to take the call
- _____ 8. Assists the pharmacist with tracking patient's medications
- _____ 9. Is trained to load mechanical equipment and keep it running smoothly
- _____ 10. Helps customers over the phone

Multiple Choice

Complete the question by circling the best answer.

1. The Board of Pharmacy
 - A. Registers pharmacists and technicians
 - B. Provides a way for consumers to report complaints, problems, or illegal pharmacy actions
 - C. Reviews and updates current pharmacy rules and regulations
 - D. All of the above
2. The term *nonjudgmental* means that technicians can perform
 - A. Tasks that require little or no thought
 - B. Tasks within a pharmacy setting that must be checked and approved by a pharmacist
 - C. Tasks that require interpreting scientific studies
 - D. Tasks that are unethical
3. Which of the following hospital units is not a requirement for pharmacy technicians to keep stocked?
 - A. ICU
 - B. OR
 - C. ATM
 - D. CCU
4. The reason that medications need to be repackaged in unit-dose is
 - A. Medication is not available in unit-dose
 - B. A hospital cost savings
 - C. A and B
 - D. None of the above