

SI Pharmacy Technician - Full Discipline Demo

Preparing Hospital Drugs

Final Report - Answer Guide

Institution	Science Interactive University
Session	SI Pharmacy Technician - Full Discipline Demo
Course	SI Pharmacy Technician - Full Discipline Demo
Instructor	Sales SI Demo

Test Your Knowledge

Match each term with the best description.

Terms to match:

- IV bag
- Ampule
- Parenteral drugs
- Vial

Descriptions to match with:

- Drugs that are administered via a route outside of the digestive system.
- Contains liquid or powder in plastic or glass containers with soft rubber stoppers.
- Small sealed glass containers filled with fluid.
- Method of delivery for intravenous medications.

Correct answers:

1 Parenteral drugs 2 Vial 3 Ampule 4 IV bag

Correctly order each step of the use in Investigation New Drugs in a hospital pharmacy with the first step on the top and the last step on the bottom.

≡ Nurses administer the IND products to the patient.

1 **Correct answer:** The Pharmacy and Therapeutics committee establishes policies and procedures regarding the protocols needed for handling the INDs.

≡ The prescribing doctor provides authorization from the study sponsor and prescribes the IND to a patient.

2 **Correct answer:** The prescribing doctor provides authorization from the study sponsor and prescribes the IND to a patient.

≡ Unused or expired portions are returned to the manufacturer.

3 **Correct answer:** The pharmacy prepares the IND.

≡ The Pharmacy and Therapeutics committee establishes policies and procedures regarding the protocols needed for handling the INDs.

4 **Correct answer:** Nurses administer the IND products to the patient.

≡ The pharmacy prepares the IND.

5 **Correct answer:** Unused or expired portions are returned to the manufacturer.

Exploration

Vials can be either single dose or multidose.

True

False

✓

Medication must be injected into the IV bag through the spiking port.

True

False

✓

_____ generally administer the IND products to the patients.

- ☐ Pharmacy technicians
- ☒ Nurses
- ☐ Physicians
- ☐ Pharmacists



Exercise 1

In this exercise, did you use a single-use vial or a multi-use vial? Explain your answer.

What was the purpose of the filter needle when drawing medication out of the ampule?

Why did you need to push air into the vial before filling the syringe but not before filling the ampule?

Photo 1: Syringe Filled from Vial
(SAMPLE ANSWER BELOW)





Photo 2: Syringe Filled from Ampule
(SAMPLE ANSWER BELOW)



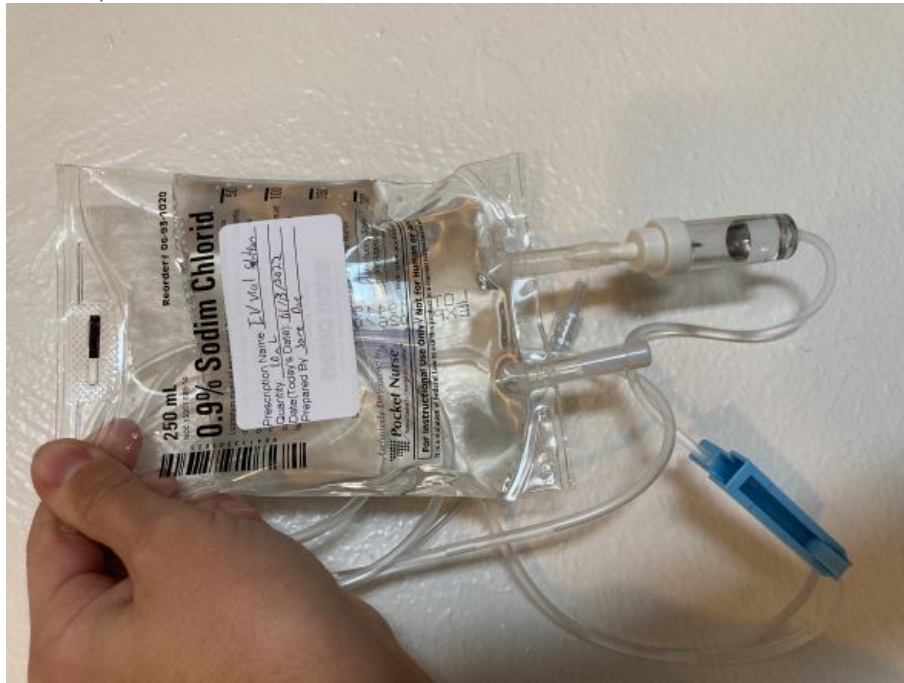


Exercise 2

Why is it so important to follow aseptic techniques and procedures when filling or spiking the IV bag?

How are the contents from an IV bag delivered into the patient's body?

Photo 3: Spiked IV Bag
(SAMPLE ANSWER BELOW)



Exercise 3

What would you need to do with any unused IND product at the conclusion of the study?

Why is it so important to properly document the distribution of an investigational new drug?

Will the form used to document the storage and distribution of INDs used in this exercise be identical across all hospitals? Why or why not?

Data Table 1: Investigational Drug Record Form
(SAMPLE ANSWER BELOW)

Principle Investigator	Gregory Mann		Drug Name	Pretendicillin	
Lot	1234		Units per Container	30	
Date Received	Rx #	Patient Initials	Patient #	Dose/Frequency	Quantity Received
11/17/2021	1234567-01	HR	0052	300 mg once daily	15
11/17/2021	1234568-	JC	0053	300 mg once	15

Competency Review

Most _____ are weakened at the base of the neck to allow for easy breaking.

- ☒ ampules ✓
- ☐ vials
- ☐ IV bags
- ☐ INDs

The _____ is the part of the IV tubing that connects to the IV port in the patient's arm.

- ☐ medication port
- ☐ spiking port
- ☐ IV spike
- ☒ luer connector ✓

All IND products must be kept separate from other drugs in the pharmacy.

- ☒ True ✓
- ☐ False

INDs are most commonly encountered in teaching hospitals.

- ☒ True ✓
- ☐ False

When withdrawing liquid from a vial using a syringe, the needle should be held against the rubber stopper at a _____ degree angle.

- ☐ 0
- ☒ 45
- ☐ 60
- ☐ 90

✓

After withdrawing the solution from an ampule, the regular needle should be swapped out for a filter needle.

- ☐ True
- ☒ False

✓

What do you do immediately after injecting medication through the medication port of the IV bag?

- ☐ Gently agitate the IV bag to thoroughly mix the medication with the IV bag solution.
- ☒ Squeeze the injection port above the plastic adapter to force the medication out of the medication port and into the IV bag.
- ☐ Spike the IV bag.
- ☐ Prime the IV bag.

✓

Who develops the policies and procedures used by a hospital for handling IND products?

- ☐ The FDA
- ☒ The Pharmacy and Therapeutics committee
- ☐ The drug sponsor
- ☐ The prescribing physician

✓

Extension Questions

In addition to intravenous administration, parenteral drugs can also be injected subcutaneously or intramuscularly. Although intravenous delivery of medication is the most precise method for delivering a specific dose, both subcutaneous and intramuscular injections are easier to administer. Use this information to give one scenario in which

intravenous drug administration would be preferable, and one scenario in which subcutaneous or intramuscular drug administration would be preferable. Explain your answers. (SAMPLE ANSWER BELOW)

Student answers will vary. Sample answers include intravenous injection would be preferable for most drugs in a hospital setting where the expertise is available to easily locate a vein for delivery of the drug. Intramuscular injection would be preferable to deliver a drug where less precision is required and the time and/or expertise to find a vein is not available, such as during an emergency scenario.