

Test Bank Chapter 2: Lifting Prints

1. In processing a crime scene for fingerprints, what precautions should be taken prior to dusting for this type of trace evidence?
 - a. Shine a light to enhance the location of latent prints.
 - b. Decide which type of media you will use on the surface of the print.
 - c. Wear gloves so that you don't transfer your prints onto the crime scene. (*)
 - d. Package the recovered print in a breathable container.
 - e. Use a sterile Q-tip to obtain a small portion of a patent print.
2. What was the significance of the Wagga Wagga homicide case?
 - a. Case involved a novel way to use plant DNA to convict a killer.
 - b. Case involved a novel way to use microbes to help solve a case.
 - c. Case involved a novel way to obtain a footprint in snow.
 - d. Case involved a novel way to obtain a fingerprint from a latex glove. (*)
 - e. Case involved a novel way to solve a crime using probability.
3. Prints that do not require any enhancement (e.g. fingerprint impressions made on a clay surface) are referred to as
 - a. latent prints.
 - b. patent prints.
 - c. plastic prints.
 - d. Choices 'a' and 'b' are correct.
 - e. Choices 'b' and 'c' are correct. (*)
4. What are the elements or actions needed when processing a latent fingerprint?
 - a. Apply an appropriate type of enhancing media onto the print.
 - b. Apply lifting tape to remove the print from the original surface.
 - c. Document the appropriate information associated with the lifted print.
 - d. Photograph the print.
 - e. Process the print using a device called a comparison microscope. (*)
5. What were the issues surrounding Lt. Jenkins previous partner?
 - a. Juarez, his partner, like Chang was a rookie with little experience.
 - b. Juarez, his partner, had an affair with Lt. Jenkins wife.
 - c. Juarez, his partner, would rather work on assigned cases alone.
 - d. Juarez, his partner was a corrupt officer. (*)
 - e. Juarez, his partner, was very abrasive and arrogant towards Jenkins.
6. A question was posed to Helen about which evidence item should be given priority. What was that item?
 - a. DNA

- b. Blood
 - c. Fingerprints (*)
 - d. Shell casing
 - e. Spent bullet
7. A humorous moment took place between Jenkins and Chang as they were processing the scene for prints. Which description below best describes that moment?
- a. Coffee was accidentally spilled on Chang's shoes.
 - b. Fingerprint dusting powder ended up on Jenkins face. (*)
 - c. Jenkins tripped over Chang's purse.
 - d. Chang hit her head on the Subaru's open hatch back door.
 - e. A stray dog ended up licking fingerprint powder off of Chang's face.
8. When Jenkins went to Captain White to complain about being paired up with Criminalist Chang, what was the Captain's response?
- a. White would look into partnering Chang with another detective.
 - b. White insisted that Jenkins bring Chang up to speed.
 - c. White responded by saying "You'll be fine."
 - d. Choices 'a' and 'b' are correct.
 - e. Choices 'b' and 'c' are correct. (*)

Short answer questions

9. Miss Chang had just graduated from UC Berkeley with outstanding credentials yet she was having second thoughts about her new job. What was the issue she was struggling with?

She was well versed as a lab technician in genetic analysis – in a setting where a sample came in, she was asked to process it, and she reported back on the findings. Her current situation now called on her to process biological evidence from an actual crime scene, which now added a very human element to the analysis. Could she make the transition from academia into the real world?

- 2.8. Describe a situation where this technique of developing a print from thermal paper could help law enforcement solve a crime? ***(ans. person might be seen making an illegal transaction at an ATM and placing his/her prints on the paper receipt, which is discarded in the garbage, retrieve from garbage and attempt to lift prints)***
10. (a) Based on the circumstances associated with the discovery of the impounded vehicle, what were the two major evidence items that needed to be processed? (b) What sequential order were they processed and why?

a. Fingerprints and blood.

b. Fingerprints were processed first followed by collection of blood samples (for subsequent typing and DNA analysis). Because of the time that the vehicle was sitting in impound, fingerprints would be more prone to degradation and more likely to be compromised. Collection of the blood, though dried, was not as urgent a priority. The investigators were operating under the assumption that DNA could still be extracted from dried blood

11. While processing the crime scene, Lt. Jenkins retold the story of the Wagga Wagga case to Miss Chang. The parties involved may have interpreted the purpose of this message differently. Explain, from both Miss Chang's perspective and Lt. Jenkins perspective, why this case was told.

Chang may have interpreted this case as another test to see if she could handle the unpleasant nature of crime scenes.

Jenkins motive may have been to show how a criminalist was able to recover fingerprints in a very novel way. Or, he was trying to appall her to such a degree that she would quit the investigation.

12. Raising a child is the most rewarding thing one can experience in life. One of the experiences is teaching a child a skill (such as, for example, how to ride a bicycle or drive a car). Cite in the story where a similar moment between Jenkins and Chang occurred and explain how it is similar to the relationship of a parent and child.

Jenkins instructs Chang on how to lift a fingerprint. He is reluctant at first but eventually lets go enough that she is allowed to lift prints off of the crime scene on her own.

13. As Lt. Jenkins excused himself to clean up the fingerprint powder that ended up on his person. Miss Chang had a moment in reflection. What was that moment of reflection?

She uttered the words "I'll be right here MAKING THE BEST OF IT," a phrase her father would always say to her in situations that were unpleasant or not to her liking.

14. In Chapter 1, it was clear that Lt. Jenkins expressed reluctance in being assigned a partner in this case. Where do you think the relationship is at this point? Cite evidence to validate your conclusion.

No change

(a) incident involving a fumbled exchange of the fingerprint jar resulting in some of the powder ending up on Jenkins face

(b) Jenkins repeating his initial complaint working on this case with a partner to his boss

15. What two main evidence items were being processed from the vehicle? What information could be derived from these items?

Fingerprints

(a) Fingerprints can be checked against a database and can inform authorities who was in or around the vehicle.

(b) Fingerprints can serve as a potential source of DNA.

Blood evidence

(a) Blood can yield a DNA profile, which can address its source.

(b) The type of blood spatter pattern can give information as to how it got there.

(c) The size of the bloodstain in the vehicle can be used to help determine if the person lost a life-critical amount of blood.

Chapter 2: Recovering Prints

1. In fingerprint analysis, the designation "2R" refers to which finger?
 - a. The thumb on the left hand.
 - b. The ring finger on the right hand.
 - c. The index finger on the right hand. (*)
 - d. The little finger on the right hand.
 - e. The thumb on the right hand.
2. The terms visible, plastic and latent are associated with
 - a. DNA.
 - b. firearms.
 - c. blood spatter
 - d. chromatography.

- e. fingerprint impressions. (*)
3. Which one of the items listed below is **not** considered a media used to dust for fingerprints?
 - a. Ultraviolet light (*)
 - b. Black powder
 - c. Iodine crystals
 - d. Cyanoacrylate
 - e. Ninhydrin
 4. What is the property of human skin that allows fingerprint dusting media and cyanoacrylate fumes to enhance latent prints?
 - a. Hair follicles embedded in the scalp.
 - b. Epidermal cells absorb dusting media and cyanoacrylate fumes.
 - c. Hot and cold nerve receptors found on the surface of human skin.
 - d. Skin surfaces secrete sweat, oils, and proteins. (*)
 - e. Skin secretes melanin, which reacts to dusting media and cyanoacrylate fumes.
 5. An enclosed chamber, a beaker of warm water, and a warming plate are associated with which fingerprint technique?
 - a. Iodine fuming
 - b. Super glue fuming (*)
 - c. Ninhydrin fuming
 - d. DFO fuming
 - e. Charcoal fuming

Short answer question:

6. You are asked to lift latent prints off of a piece of cardboard found at the crime scene. Explain the procedure you would follow to obtain and record the print (s) lifted from this surface.
 - a. *protect yourself from contamination by putting on gloves and mask*
 - b. *apply appropriate fingerprint material e.g., most likely would not use traditional dusting powder, go with possibly DFO or fuming*
 - c. *photograph object and fingerprint*
 - d. *document your findings*

Chapter 2: In the Crime Lab

1. Each finger is identified by (a) which hand they are on and (b) a digit number ranging from 1 to 10. Which hand and digit does the numbering system begin with and end with?

- a. Right thumb ending with the left little finger. (*)
 - b. Left thumb ending with the right little finger.
 - c. Right little finger ending with the left little finger.
 - d. Left thumb ending with the right little finger.
 - e. Right index finger ending with the left little finger.
2. What is a reference set of fingerprints?
 - a. Prints lifted from a crime scene.
 - b. Prints created from a known person. (*)
 - c. Prints that have been subject to iodine fuming.
 - d. Latent prints that have been enhanced with dusting powder.
 - e. Patent prints left in modeling clay.
3. When making a reference set of fingerprints from ink, make sure that the ink
 - a. only covers the central portion of the fingertip.
 - b. covers the entire palm of the hand.
 - c. covers the entire surface of the tip of the finger. (*)
 - d. All of the above.
 - e. Choice 'a' and 'c' are correct.
4. When superglue fuming is used to visualize a latent print, what precaution should be implemented?
 - a. Create a humid environment by heating up a beaker of water.
 - b. After fuming, further enhance the print by applying fingerprint powder.
 - c. The protocol should be carried out in a fume hood or in a well-ventilated area. (*)
 - d. Apply lifting tape to remove the developed fingerprint from the evidence item.
 - e. Heat the superglue such that the vapors are released into an enclosed chamber.
5. Which of the following chemicals could be used to enhance a fingerprint?
 - a. DFO (1,8-diazafluoren-9-one)
 - b. Cyanoacrylate
 - c. Ninhydrin
 - d. Choice 'a' and 'b' are correct.
 - e. Choice a, b, and c are correct. (*)
6. Identical twins have
 - a. the same DNA but different fingerprints. (*)
 - b. the same DNA and the same fingerprints.
 - c. different DNA and different fingerprints.
 - d. 50% similarity of their DNA and 50% of their fingerprints are identical.
 - e. the same DNA because they are a result of two eggs simultaneously fertilized by one sperm cell.

Short answer question

7. Discuss the pros and cons of using traditional fingerprint powder to enhance a latent print.

Pros:

- a. It is a tried and proven technique.***
- b. It is cost effective.***
- c. It requires a minimal amount of equipment.***

Cons:

- a. It is not as good of a media for lifting prints from a porous surface.***
- b. It can be messy to work with if not handled properly.***
- c. The black powder is difficult to visualize on dark surfaces.***