Thanksgiving Break Homework

Forensics Review



DUE: Wednesday, November 29, 2017

In this packet are questions from topics covered from the first day up until the end of the hair unit. This is GREAT review. Use your notes or the website (lscanlonscience.weebly.com) to help you.

Introduction to Forensics

Answer:

1. Which of the following is not a fact?
   1. There are many people that work together at a crime scene to collect and analyze data.
   2. Arguably, the most important person at a crime scene is the first officer to arrive.
   3. An entomologist is a type of specialist that estimates the age of insects developing on human remains.
   4. The medical examiner may perform autopsies to determine the cause of death.
2. Which of the following is true about grand juries?
   1. They are used instead of preliminary hearings
   2. They are only used in misdemeanor cases
   3. They determine if suspect is innocent or guilty
   4. It consists of 12 citizens
3. The *Frye v. United States* case resulted in the
   1. Development of the grand jury
   2. The requirement for arresting officers to read the Miranda rights to the person being arrested
   3. The idea of “innocent until proven guilty”
   4. The “general acceptance” test
4. Testimonial evidence
   1. Is evidence that includes oral or written statements given to police as well as testimony in court by people who witnessed an event
   2. Is viewed to be very reliable because it is based on eyewitness accounts
   3. Has a small influence on the outcome of an investigation or trial
   4. Is accurate because all the people who witness the crime will view the scene the same way
5. The Innocence Project found that faultiest convictions were based on
   1. Out-of-date investigating equipment
   2. Poor DNA sampling
   3. Inaccurate eyewitness accounts
   4. Officers not thoroughly observing a crime scene
6. When a person pleads not guilty because of insanity,
   1. The judge decides of there is enough evidence to stand trial
   2. The judge directly passes a sentence
   3. Only the prosecution presents
   4. The defendant must provide convincing evidence that they were unable to appreciate the nature of the crime at the time of the offense
7. Which of the following is a factor that makes a person a particularly good or bad witness?
   1. Age
   2. Race
   3. Other people
   4. All of the above
8. According to the video on police sketches, which of the following is incorrect?
   1. In academic experiments, sketches were identified correctly around 15% of the time.
   2. Incorrect sketches have sent innocent people to jail
   3. Police sketches are hard because humans process faces holistically rather than on the level on individual features
   4. When latest generation of computer programs that used the fact the humans can identify overall faces better than individual features was used in 5 real police departments, it led to arrests around 40% of the time on average and up to 60% in the most recent trial
9. According to the Brain Games video about eyewitness inaccuracy, which of the following is a characteristic of a good witness?
   1. Someone who assures the detective they saw exactly what happened
   2. Someone who is super excited to help out
   3. Someone who is measured in their thoughts
   4. Answers the questions very quickly
10. A robbery is committed in Time Square in Manhattan. Which of the following individuals would be the best eyewitness in this case? All were present at the time of the crime.
    1. Bran. A young child who was sleeping in his stroller.
    2. Jon. A business man who works in the office across the street.
    3. Dany. A woman who took a new route during her morning jog and just happened to pass by the crime scene.
    4. Jamie. A tourist taking in all the sights and sounds of Time Square.

Write:

* Pick at least 1 type of crime and write a scenario.
  + Example: Attempted Murder: Joher is fed up with her roommate Israel eating her leftovers. She sets up this elaborate plan to kill Israel. Joher knows that when Israel makes her coffee in the morning, she lets it sit on the counter to cool down. Every day for a month Joher adds a little poison to Israel’s coffee. Fortunately for Israel, she just got sick and did not end up dying.
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Crime Scene Investigation

Define:

* Crime Scene:

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* Primary Crime Scene:

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* Secondary Crime Scene:

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Answer:

1. Which of the following is the first step of a Crime Scene Investigator when he/she arrives at the scene?
   1. Collect evidence
   2. Secure the scene
   3. Speak with the first responding police officer
   4. Analyze the evidence
2. The identification method that involved the physical measurements of different body parts is known as…
   1. The Bertillon System
   2. The Clayton System
   3. The West System
   4. The Pan-Am System
3. A driver hit a bicyclist on their way to work. The location of the accident is known as the
   1. Primary crime scene
   2. Secondary crime scene
   3. Tertiary crime scene
   4. Quaternary crime scene
4. When containing a crime scene,
   1. Only the location in which evidence is clearly visible should be taped off
   2. The surrounding area around the crime scene should be taped off in case of hidden evidence
   3. As long as evidence is clearly marked, it doesn’t matter if it is taped off
   4. You want to minimize the risk of contamination so you let one person in at a time
5. Which of the following strategies are used by crime scene investigators to document a crime scene?
   1. Take verbal notes
   2. Sketch the scene
   3. Take pictures
   4. All of the above

Write:

* Briefly describe the process of documenting the crime scene.

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* What is the difference between crime scene analysis and forensic science?

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* Why is it better to secure an area larger than the crime scene?

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Types of Evidence

Define:

* Testimonial Evidence:

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* Physical Evidence:

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Answer:

1. Analysis of wounds can provide clues about
   1. The position of the victim at the time of the incident
   2. The dominant hand of the suspect
   3. The height of the suspect
   4. All of the above
2. Skeletons can be very useful in providing clues to a person’s identity. Which of the following describes information that can be collected by analyzing skeletal remains? **\*\* THERE ARE 5 ANSWER CHOICES FOR THIS QUESTION\*\***
   1. Past injury and trauma
   2. Age and stature
   3. A victim’s last meal
   4. A and B only
   5. All of the above
3. A forensic anthropologist is responsible for
   1. Examining skeletal remains to look for trauma that may help establish the pathway of a projectile or the number of puncture wounds
   2. Collect trace evidence found on the bones
   3. Running the DNA collected from the bones
   4. Determining the cause of death
4. Which of the following statements about hair and fibers is ***FALSE***?
   1. It is impossible to determine the origin of the hair collected as evidence
   2. Fibers can be from both living and non-living things
   3. Hairs and fibers can be transferred from both suspect to victim and victim to suspect
   4. A suspect can be linked to a crime based on a carpet fiber found on their boot
5. Which of the following is ***NOT*** a method to collect impression evidence?
   1. Lifting with tape
   2. Casting with plaster
   3. Photographing
   4. Using luminol and a UV light

Write:

* Describe the 3 types of impression evidence.

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* What four things can be determined from skeletal remains?

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* Describe the difference between class evidence and individual evidence.

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Fingerprints

Define:

* Fingerprint:

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* Dactyloscopy:

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* Latent print:

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* Patent print:

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Answer:

1. Which of the following is NOT a principal of fingerprints?
   1. A fingerprint is an individual characteristic; no two people have been found with the exact same fingerprint pattern
   2. A fingerprint pattern will remain unchanged for the life of an individual; however, the print itself can change due to permanent scars and skin diseases
   3. Dactyloscopy is the study of fingerprint identifications; police investigators collect dactylograms
   4. Fingerprints have general characteristic ridge patters that allow them to be systematically identified
2. AFIS is an acronym that stands for
   1. Automated Fingernail Identification System
   2. Automated Fingerprint Identification System
   3. Automated Fingerprint Identification Service
   4. Automated Fingernail Identification System
3. The \_\_\_\_\_\_\_\_\_\_\_\_\_ Principle states that with contact between two items, there will be an exchange?
   1. Fingerprint
   2. Locard
   3. Bertillon
   4. Minutiae

Write/Draw:

* Describe AT LEAST 3 methods to collect latent prints:

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* Draw AT least 4 ridge characteristics and label them:
* Draw an example of an arch, loop, AND whorl:

Hair

Define:

* Anagen phase:

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* Catagen phase:

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* Telogen phase:

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Answer:

1. When can a hair be considered individual evidence?
   1. When the root/follicle is not attached
   2. When the hair is dyed a specific color
   3. When the hair is a certain length
   4. When the root/follicle is attached
2. Which of the following is a characteristic of human hair?
   1. It is denser towards the medulla
   2. It is denser towards the cuticle
   3. Banded color patterns are present
   4. The medullary index is greater than 0.5
3. Calculate the medullary index when the width of the medulla is 0.23 micrometers and the width of the cortex is 0.98 micrometers.
4. Using the answer to the question above, is the hair sample from a human or an animal. Explain:

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Write/Draw:

* Draw a diagram of a hair. Your diagram MUST include cortex, medulla, and cuticle. Describe the function of each structure.
* What are the two types of DNA, and where is each found in a hair?

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* Describe how forensic analysts compare strands of hair?

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