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| 1. Impressions fall into three basic categories: patent, latent, and plastic.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-03 - LO: 16-03 | |

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| 2. Plastic impressions are three-dimensional imprints.  These impressions can be left in off-road surfaces such as snow, mud,  sand or grass.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-06 - LO: 16-06 FSFI.BERT.2.LO: 16-07 - LO: 16-07 FSFI.BERT.2.LO: 16-08 - LO: 16-08 | |

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| 3. Depending on how it is made, impression evidence may be either class evidence or trace evidence.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *DIFFICULTY:* | Challenging | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-02 - LO: 16-02 | |

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| 4. When a shoe or tread impression is found at a crime scene, the crime scene investigator can obtain information about the person or persons involved or about the crime itself.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-01 - LO: 16-01 FSFI.BERT.2.LO: 16-02 - LO: 16-02 FSFI.BERT.2.LO: 16-04 - LO: 16-04 | |

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| 5. Databases contain the names of specific shoe manufacturers and tread patterns used to identify different types of shoes.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-01 - LO: 16-01 FSFI.BERT.2.LO: 16-02 - LO: 16-02 FSFI.BERT.2.LO: 16-04 - LO: 16-04 | |

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| 6. Some factors that personalize our footwear include:   |  |  |  | | --- | --- | --- | |  | a. | body weight. | |  | b. | the shape of the foot and the wearer’s activities. | |  | c. | the surface on which the person usually walks. | |  | d. | All of these choices. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-01 - LO: 16-01 FSFI.BERT.2.LO: 16-02 - LO: 16-02 FSFI.BERT.2.LO: 16-04 - LO: 16-04 | |

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| 7. It is possible to determine whether a person was running or walking by:   |  |  |  | | --- | --- | --- | |  | a. | the length of the stride and the pressure or shape of the impression. | |  | b. | evidence of an asymmetrical gait. | |  | c. | the clarity of shoe wear patterns left in the ground. | |  | d. | None of these choices. | |  | e. | ​All of these choices. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-01 - LO: 16-01 FSFI.BERT.2.LO: 16-02 - LO: 16-02 FSFI.BERT.2.LO: 16-04 - LO: 16-04 | |

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| 8. The American Board of Forensic Odontology and the Innocence Project have estimated error rates for incorrect identification based on dental records. The estimated ranges of these error rates are:   |  |  |  | | --- | --- | --- | |  | a. | 18-29 percent. | |  | b. | 31-47 percent. | |  | c. | 39-65 percent. | |  | d. | 63-91 percent. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-02 - LO: 16-02 | |

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| 9. There are several different methods to make latent prints visible. These include:   |  |  |  | | --- | --- | --- | |  | a. | luminol to make bloody footprints visible. | |  | b. | dusting of the latent print, which reveals an impression and makes it visible to be photographed and lifted. | |  | c. | electrostatic lifting and gel lifting techniques, which capture ‘invisible’ impressions. | |  | d. | All of these choices. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-03 - LO: 16-03 FSFI.BERT.2.LO: 16-04 - LO: 16-04 | |

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| 10. A gel lifter is a layer of:   |  |  |  | | --- | --- | --- | |  | a. | thin gel sandwiched between plastic backing and a paper cover sheet. | |  | b. | thick gel sandwiched between paper backing and a plastic cover sheet. | |  | c. | thin gel sandwiched between paper backing and a paper cover sheet. | |  | d. | thick liquid sandwiched between paper backing and a paper cover sheet. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *DIFFICULTY:* | Challenging | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-03 - LO: 16-03 FSFI.BERT.2.LO: 16-04 - LO: 16-04 | |

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| 11. Consistent bite mark evidence alone is not sufficient for a conviction, but it does provide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ evidence that may be helpful in building a case.   |  |  |  | | --- | --- | --- | |  | a. | circumstantial | |  | b. | trace | |  | c. | class | |  | d. | individual |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-02 - LO: 16-02 | |

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| 12. The casting material used for snow is called:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | plaster of paris. | b. | plaster. | |  | c. | dental stone. | d. | stone. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-07 - LO: 16-07 | |

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| 13. Motor vehicles can leave:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | patent tire patterns. | b. | latent tire patterns. | |  | c. | plastic tire patterns. | d. | All of these choices. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-06 - LO: 16-06 FSFI.BERT.2.LO: 16-07 - LO: 16-07 FSFI.BERT.2.LO: 16-08 - LO: 16-08 | |

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| 14. A tire’s tread surface is divided into:   |  |  |  | | --- | --- | --- | |  | a. | ribs (ridges running around the circumference of the tire) and grooves (indentations). | |  | b. | ribs (ridges running around the circumference of the tire) and treads (indentations). | |  | c. | ribs (ridges running around the circumference of the tire) and tread patterns (indentations). | |  | d. | None of these choices. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-06 - LO: 16-06 FSFI.BERT.2.LO: 16-07 - LO: 16-07 FSFI.BERT.2.LO: 16-08 - LO: 16-08 | |

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| 15. Track width is measured from the center of each tire to the center of the:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | opposite tire. | b. | vehicle. | |  | c. | opposite side of the vehicle. | d. | None of these choices. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-05 - LO: 16-05 | |

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| 16. The turning diameter is a measure of the smallest circle that can be driven by a vehicle or the minimal space required for a car to make a:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | left turn. | b. | right turn. | |  | c. | 360-degree turn. | d. | U-turn. | |  | e. | ​All of these choices. | f. | ​None of these choices. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-05 - LO: 16-05 | |

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| 17. When a vehicle turns a sharp corner, even at moderate speeds, a track is created by the additional stress put on the:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | front outer tire. | b. | front inner tire. | |  | c. | back outer tire. | d. | back inner tire. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-05 - LO: 16-05 | |

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| 18. Part of the process for determining whether a vehicle was involved in a crime is to paint ink on a tire and drive the vehicle over smooth pavement covered with paper or cardboard. In order to ensure that all individual characteristics of the tread are captured when the tire print is made, what minimum length of print is required?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | three meters | b. | four meters | |  | c. | five meters | d. | six meters |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-06 - LO: 16-06 FSFI.BERT.2.LO: 16-07 - LO: 16-07 FSFI.BERT.2.LO: 16-08 - LO: 16-08 | |

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| 19. Tire mark types include:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | skid marks. | b. | yaw marks. | |  | c. | tire scrubs. | d. | All of these choices. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-05 - LO: 16-05 FSFI.BERT.2.LO: 16-06 - LO: 16-06 | |

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| 20. What is the term used to describe when a charged piece of film is used to obtain an image left by a dry shoe?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | gait and shuffle pattern analysis | b. | gel lifting | |  | c. | electrostatic dusting and lifting | d. | All of the above. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-01 - LO: 16-01 FSFI.BERT.2.LO: 16-02 - LO: 16-02 FSFI.BERT.2.LO: 16-04 - LO: 16-04 | |

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| 21. Through experience and experimentation, investigators can estimate the speed of a vehicle by using the “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_” formula.   |  |  | | --- | --- | | *ANSWER:* | skid-to-stop | | *POINTS:* | 1 | | *DIFFICULTY:* | Challenging | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-05 - LO: 16-05 FSFI.BERT.2.LO: 16-06 - LO: 16-06 | |

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| 22. ​Comparing bite patterns of a suspect to bite patterns associated with the crime scene involves comparing bite impressions and marks. The number of teeth, chipped teeth, and distances between teeth are a few specific details that may be compared. How many total points of comparison may be used when comparing bite patterns?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   |  |  | | --- | --- | | *ANSWER:* | 76 points | | *POINTS:* | 1 | | *DIFFICULTY:* | Challenging | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-02 - LO: 16-02 | |

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| 23. An adult's height is generally related to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | his or her foot size | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-01 - LO: 16-01 FSFI.BERT.2.LO: 16-02 - LO: 16-02 FSFI.BERT.2.LO: 16-04 - LO: 16-04 | |

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| 24. What term describes the cuts that are made across the rib of the tire to improve traction? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | symmetrical | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-06 - LO: 16-06 | |

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| 25. Every make and model of vehicle has its own track width and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ measurements.   |  |  | | --- | --- | | *ANSWER:* | wheelbase | | *POINTS:* | 1 | | *DIFFICULTY:* | Average | | *LEARNING OBJECTIVES:* | FSFI.BERT.2.LO: 16-05 - LO: 16-05 | |