Questions from Chapter 7

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| 1. Because DNA is composed of alternating sugar and phosphate molecules, DNA is known as a double helix.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False | |
| 2. Most females have one X and one Y sex chromosome (XY).   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False | |
| 3. mtDNA is used to trace ancestry through the female line.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False | |
| **4.**People are always shedding cells. Therefore, DNA can be recovered from:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | skin cells. | b. | saliva. | |  | c. | semen. | d. | a and b only. | |  | e. | ​a and c only. | ab. | a, b, and c. | |
| 5. If one person has two alleles that are the same for a specific STR, then that person is considered to have:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | rare occurring alleles. | b. | heterozygous genotypes. | |  | c. | frequently occurring alleles. | d. | homozygous genotypes. | |
| 6. Alternate forms of a gene are called:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | chromosomes. | b. | DNA. | |  | c. | alleles. | d. | RNA. | |
| 7. (GAAT) (GAAT) (GAAT) (GAAT) is an example of:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | restriction fragments. | b. | DNA fingerprinting. | |  | c. | PCR. | d. | STR. | |
| 8. Approximately how many base pairs are in the human body?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | 6 million base pairs. | b. | 6 billion base pairs. | |  | c. | 6 thousand base pairs | d. | 6 trillion base pairs. | |
| Questions from Chapter 9  9. Narcotics are non-sleep-inducing drugs used to relieve pain.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False | |

10. The Greek philosopher, Socrates, was one of the earliest reported victims of poisoning.

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|  | a. | True |
|  | b. | False |

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| 11. Toxicology is the study of poisons and the identification of drugs and other substances a person may have used for medicinal purposes only.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False | |

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| 12. Although poisoning is popular in murder mysteries and detective stories, it is:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | a common form of murder. | b. | not a common form of murder. | |  | c. | a common form of suicide. | d. | a common form of manslaughter. | |

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| 13. There is a drug which is frequently made in home laboratories. As the chemicals used in the production of the drug are very dangerous, there are frequently explosions that occur during production. The name of this drug is:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | depressants ("downers"). | b. | synthetic marijuana ("spice"). | |  | c. | PCP ("angel dust"). | d. | methamphetamines ("meth"). | |  | e. | ​All of these choices. |  |  | |
| 14. Controlled substances are defined as:   |  |  |  | | --- | --- | --- | |  | a. | illegal drugs whose sale, possession, and use are prohibited because of the mind-altering effect of the drugs and the potential for abuse. | |  | b. | legal drugs whose sale, possession, and use are restricted because of the mind-altering effect of the drugs and the potential for abuse. | |  | c. | legal drugs whose sale, possession, and use are permitted. | |  | d. | None of these choices. | |
| 15. Hallucinogens are:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | never derived from plants. | b. | rarely derived from plants. | |  | c. | often derived from plants. | d. | always derived from plants. | |
| 16. Narcotics act as:   |  |  |  | | --- | --- | --- | |  | a. | depressants and suppress pain. | |  | b. | stimulants and heighten pleasure. | |  | c. | mood enhancing substances that flood the brain with dopamine. | |  | d. | None of these choices. | |
| 17. Stimulants:   |  |  |  | | --- | --- | --- | |  | a. | increase feelings of energy and alertness, while suppressing appetite. | |  | b. | decrease feelings of energy and alertness, while suppressing appetite. | |  | c. | increase feelings of energy and alertness, while increasing appetite. | |  | d. | increase feelings of lethargy and alertness, while increasing appetite. | |

Questions from Chapter 8

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| 18. \_\_\_\_\_\_ Blood is the circulating tissue consisting of two types of cells: red blood cells and platelets.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |   19. \_\_\_\_\_\_ The presence or absence of antigens on white blood cells determines a person's blood type.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False | |
| 20. \_\_\_\_\_\_ Red blood cells:   |  |  |  | | --- | --- | --- | |  | a. | carry respiratory gases, mainly oxygen and carbon dioxide. | |  | b. | fight disease and foreign invaders. | |  | c. | aid in blood clotting. | |  | d. | are involved in repairing damaged blood cells. | |
| 21. \_\_\_\_\_\_ White blood cells secrete proteins:   |  |  |  | | --- | --- | --- | |  | a. | known as antibodies, which assist in the immune response. | |  | b. | known as viruses, which assist in the immune response. | |  | c. | known as bacteria, which assist in the immune response. | |  | d. | known as parasites, which assist in the immune response. |   22. \_\_\_\_\_\_ The immune system functions to protect our bodies by identifying cells or molecules that are foreign, such as:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | viruses. | b. | bacteria. | |  | c. | parasites. | d. | All of these choices. | |
| 23. \_\_\_\_\_\_ Each blood type is determined by:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | a DNA reaction test. | b. | an antibody reaction test. | |  | c. | a protein reaction test. | d. | a RF factor reaction test. | |
| 24. \_\_\_\_\_\_ Of the four main human blood types using the ABO system, the largest percentage of the U.S. population is made up of:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | Type O. | b. | Type A. | |  | c. | Type B. | d. | Type AB. | |
| 25. \_\_\_\_\_\_ What term describes the clumping of red blood cells?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | agglutination | b. | antigens | |  | c. | eosinophil | d. | lymphocyte | |
| 26. \_\_\_\_\_\_ Which type of bloodstain pattern suggests that bloody hair was dragged across the floor?   |  |  |  | | --- | --- | --- | |  | a. | wipe | |  | b. | arterial gush | |  | c. | swipe | |  | d. | transfer pattern | |
| 27. \_\_\_\_\_\_ Today blood splatter evidence is used to explain events:   |  |  |  | | --- | --- | --- | |  | a. | at all death scenes. | |  | b. | at vehicular homicide scenes. | |  | c. | during crime-scene analysis. | |  | d. | ​None of these choices. | |  | e. | ​All of these choices. | |

Questions from Chapter 10

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| 28. Generally, the primary purpose of forging something is to profit from the fake or alteration.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False | |

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| 29. Initial comparisons of documents are done with:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | the naked eye. | b. | a hand-held lens. | |  | c. | a microscope. | d. | All of these choices. | |

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| 30. When a material gain, such as money, accompanies a forgery, it is called:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | a monetary gain. | b. | fraudulence. | |  | c. | battery. | d. | deception. | |

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| 31. Criminals can alter or acquire checks in many ways, including:   |  |  |  | | --- | --- | --- | |  | a. | ordering someone else’s checks from a deposit slip. | |  | b. | directly altering a check. | |  | c. | intercepting someone’s check, altering it and cashing it. | |  | d. | All of these choices. | |

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| 32. Literary forgery refers to the forgery of a:   |  |  |  | | --- | --- | --- | |  | a. | piece of writing, such as an historic letter or a manuscript. | |  | b. | signature. | |  | c. | piece of art. | |  | d. | None of these choices. | |

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| 33. Documents are sometimes chemically treated to make them look:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | younger. | b. | older. | |  | c. | more authentic. | d. | foreign. | |

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| 34. When currency or other items are copied for the purpose of deception and profit, it is called:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | forgery. | b. | fraud. | |  | c. | ​counterfeiting. | d. | scamming. | |  | e. | ​All of these choices. | ab. | None of these choices. | |

Questions from chapter 11

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| 35. ​On a decomposed body, the feeding larvae may have human tissue stored in their crops that can be analyzed to determine:   |  |  |  | | --- | --- | --- | |  | a. | ​whether the body was moved after death. | |  | b. | ​whether the deceased was exposed to either toxic chemicals or recreational drugs. | |  | c. | ​whether the body was covered, buried, or submerged in water. | |  | d. | ​whether the deceased was restrained while alive. | |
| 36. ​Within minutes of death, odor emitted from a dead body can be detected by blow flies from:   |  |  |  | | --- | --- | --- | |  | a. | ​a mile away. | |  | b. | ​a half-mile away. | |  | c. | ​a quarter-mile away. | |  | d. | ​a 50-yard radius. | |
| 37. ​Flesh flies:   |  |  |  | | --- | --- | --- | |  | a. | ​arrive within minutes of death and feed on the sweat, blood, urine, and feces of the body. | |  | b. | ​arrive within minutes of death and lay eggs on the body. | |  | c. | ​arrive within minutes of death and deposit living larvae onto the flesh. | |  | d. | ​All of the above. | |

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| 38. ​The arrival of which type of beetle is associated with the advanced stage of a dead body?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​sexton beetle | b. | ​American carrion beetle | |  | c. | ​hide beetle | d. | ​harry rove beetle | |

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| 39. Coffin flies are: ​   |  |  |  | | --- | --- | --- | |  | a. | ​about the size of fruit flies. | |  | b. | ​most likely to appear if the victim is concealed or wrapped in plastic or blankets. | |  | c. | ​an indication that a body was left in a car for several days. | |  | d. | ​All of these choices. | |

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| 40. In order to provide the most accurate estimate of postmortem intervals at a crime scene, which type of larvae should be collected? ​   |  |  |  | | --- | --- | --- | |  | a. | ​the oldest larvae | |  | b. | ​the youngest larvae | |  | c. | ​larvae on internal organs | |  | d. | ​larvae on arms, legs, and head and neck | |
| 41. Environmental conditions affect the growth of larvae. Consequently, in the collection of meteorological data, it is suggested that rainfall amounts be recorded for a period of: ​   |  |  |  | | --- | --- | --- | |  | a. | ​2-3 weeks before the victim's disappearance and 3 to 5 hours after the body was discovered. | |  | b. | ​2-3 days before the victim's disappearance and 3 to 5 days after the body was discovered. | |  | c. | ​1-2 days before the victim's disappearance and 3 to 5 days after the body was discovered. | |  | d. | ​1-2 weeks before the victim's disappearance and 3 to 5 days after the body was discovered. | |

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| 42. ​The number of hours at an adjusted average temperature, using Celsius degrees, that it takes an insect species to reach a particular stage of development is expressed in:   |  |  |  | | --- | --- | --- | |  | a. | ​annual degree hours. | |  | b. | ​adjusted degree hours. | |  | c. | ​average degree hours. | |  | d. | ​accumulated degree hours. | |

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| 43. The lower limit threshold is the temperature below which growth and development cease for an insect. For most insects, what temperature represents their lower limit threshold? ​   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​10°C | b. | ​15°C | |  | c. | ​20°C | d. | ​25°C | |

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| 44. ​One type of insect typically arrives within minutes after death. Therefore, this type of insect is considered to be timekeepers for postmortem intervals. Which type of insect is this?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | ​sexton beetle | b. | ​flesh flies | |  | c. | ​blowflies | d. | ​houseflies | |

Questions from Ch-12

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| 45. The reason someone dies is called the:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | manner of death | b. | cause of death. | |  | c. | type of death. | d. | None of these choices. | |

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| 46. Liver mortis means roughly, the:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | moment of death. | b. | day of death. | |  | c. | death color. | d. | time of death. | |
| 47. Death stiffness is roughly defined as:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | cause of death. | b. | manner of death. | |  | c. | rigor mortis. | d. | liver mortis. | |

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| 48. Rigor mortis is:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | permanent. | b. | one cause of death. | |  | c. | temporary. | d. | one manner of death. | |

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| 49. If a body shows no visible rigor, it has probably been dead:   |  |  |  | | --- | --- | --- | |  | a. | less than two hours or more than forty-eight hours. | |  | b. | less than ten hours or more than seventy-two hours. | |  | c. | less than twenty-four hours or more than seventy-two hours. | |  | d. | more than two hours or less than forty-eight hours. | |

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| 50. Factors affecting rigor include:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | temperature. | b. | activity before death. | |  | c. | body weight. | d. | All of these choices. | |
| 51. To take a corpse’s temperature, forensic investigators insert a thermometer into the:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | into the liver or rectum. | b. | into the stomach or mouth. | |  | c. | between the toes. | d. | under or behind the ear. | |

Questions from CH-14

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| 52. \_\_\_\_\_What protects our vital organs?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | epiphysis | b. | ligaments | |  | c. | cartilage | d. | joints | |  | e. | ​diaphysis | f. | ​bones | |  | g. | ​red marrow | h. | ​All of the above. | |

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| |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 53. \_\_\_\_\_A joint is the location where bones meet.  Joints contain several kinds of connective tissue.  These include:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | cartilage. | b. | ligaments. | |  | c. | tendons. | d. | All of these choices. | |   54. \_\_\_\_\_After all bones have become fully developed, an adult has 206 bones.  A baby has:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | 306 bones. | b. | 370 bones. | |  | c. | 206 bones. | d. | 270 bones. | |

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| 55. \_\_\_\_\_Which suture(s) on a skull begin(s) closing after age 60?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | coronal suture | b. | sagittal suture | |  | c. | squamosal suture | d. | sacral suture | |
| 56. \_\_\_\_\_Determination of ancestry from skeletal remains is difficult. Ancestry is probably best indicated by:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | the bones of the skull. | b. | the shape of the molars. | |  | c. | the surface of the pelvis. | d. | the ratio of the humerus to the femur. | |

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| 57. \_\_\_\_\_The main suture mark(s) on a skull, marking where the bones are growing together, are:   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | the lambdoidal. | b. | the sagittal. | |  | c. | the coronal. | d. | All of these choices. | |
| 58. \_\_\_\_\_Nuclear DNA can be extracted from bones and teeth to determine personal identification. If, however, the nuclear DNA is degraded or damaged, there is another substance which is more plentiful and durable that can be analyzed. What is the name of this substance?   |  |  |  | | --- | --- | --- | |  | a. | mitochondrial DNA | |  | b. | STR DNA | |  | c. | ischium DNA | |  | d. | red blood cell DNA | |