

Forensics Final Exam

Your Score:

Highest Possible Score: 50

Multiple Choice: For each of the following questions, circle the letter of the answer that best answers the

- Where is a body stored before an autopsy?
 - Placed in a refrigeration unit at the nearest police station.
 - It held in a refrigeration unit in the morgue
 - It is stored in a cooler with ice in the morgue
- Most deaths occur in the presence of
 - Strangers
 - No one, alone with witnesses
 - Friends and family.
- Two pieces of evidence, which would be the responsibility of the Firearms Unit are
 - wood and drugs
 - discharged bullets and cartridge cases
 - ammunition and blood
- What security measures are taken to prevent counterfeiting?
 - Padlock icon and Security Screen
 - Security Checklist and Watermark
 - Safety Paper and Secret Strip
- _____ glass tubes 6 to 10 mm in diameter and from 25 to 40 cm in length filled with layers of different densities.]
 - Radial Lines
 - Soil
 - Density-Gradient Tube
- The medullary index measures what]
 - An estimate of the length of the hair taken up by the medulla
 - An estimate of the color of the hair taken up by the medulla
 - An estimate of the width of the hair taken up by the medulla.
- Two common types of arsenic are:
 - Pesticides and insecticides
 - Pesticides and Narcotics]
 - Stimulants and insecticides
- What is a diener?

- A. A morgue attendant who is responsible for moving and cleaning the body
B. Someone who oversees all procedures in a morgue
C. A morgue attendant that is responsible for tagging all evidence
9. How many chromosomes are there in a human cell?
- A. 64
B. 46
C. 32
10. If defensive wounds are found on the victim where would you look for evidence of the identity of the perpetrator and what would you hope to find?
- A. perpetrators finger nails
B. victim's finger nails
C. victim's hands
11. _____ glass which as been tempered so as not to crack or slither in the fashion of normal glass
- A. Tempered Glass
B. Stress Marks
C. Density-Gradient Tube
12. What is the main purpose for examining a hair found at the crime scene?
- A. To establish whether the hair originates from a human or animal.
B. To establish whether the hair color.
C. To establish whether the hair originates from a child or adult.
13. What is a "gross exam"?
- A. Overall exam
B. An exam with a horrible odor
C. The largest part of the exam]
14. _____ a drop of a chemical reagent is added to a small quantity of the drug on a microscopic slide. After a short time, a chemical reaction ensues, producing a crystalline precipitate.
- A. Mass Spectrometry
B. Marquis
C. Microcrystalline Test
15. _____ are made by using a chemical or mechanical abrasive.
- A. Copies
B. Erasures
C. Exemplar
16. The two most common solvents in a poisoning is _____.
- A. Ethanol & Water
B. Rat Poisoning and Orange Juice
C. Bleach and Milk
17. Where do a person's VNTRs come from?

- A. A specific location in a person's DNA.
 - B. The genetic information donated by his or her parents
 - C. A genetic abnormality.
18. What type of information would you hope to get from drugs found at a crime scene?
- A. Type and Visual
 - B. Visual and Comparison
 - C. Type and Strength of drug
19. What is a trait?
- A. It is not a person's hair color, eye color or the color of skin
 - B. It is a characteristic that two friends share.
 - C. It is a notable feature or quality in a person.
20. _____ the process performed on chromatography to develop is invisible components of samples.
- D. Visualize
 - E. Molarity
 - F. Solvents
21. What is the easiest way to rule out Accidental Death?
- A. Complete the autopsy
 - B. Reconstruct what happened by first determining what did happen.
 - C. Reconstruct what happened by first determining what didn't happen.
22. The complete set of instructions for making a human being is found where?
- A. DNA
 - B. Gene
 - C. Trait
23. _____ are accomplished by adding content with similar ink or print to change the original context]
- A. Obliterations
 - B. Alterations
 - C. Prints
24. What is the name of the document you signed the evidence out on?
- D. Custody Form
 - E. Sign out sheet
 - F. Chain of Custody
25. Does every cell in the body contain DNA?
- A. No, cells that has abnormalities do not contain DNA.
 - B. Yes, without DNA a cell could not exist.
 - C. No, Mature red blood cells and cornified cells in the skin, hair, and nails contain no nucleus.
26. What does a pathologist look for in an electrocution?

- A. Charring or burn marks around the point where the electricity first entered the body.
 - B. Charring or burn marks around the body.
 - C. Charring or burn smell around the point where the electricity first entered the body.]
27. _____ any disintegrated surface material, both natural and artificial, that lies on or near the earth's surface
- A. Concentric Cracks
 - B. Soil
 - C. Radial Cracks
28. _____ glass fractures lines which form on the surface opposite that of the penetrating force
- D. Soil
 - E. Concentric Cracks
 - F. Radial Lines
29. What is the function of the protein hemoglobin?
- G. Capture and carry oxygen.
 - H. Carry and release oxygen.
 - I. Capture and process oxygen.
30. _____ is a calculated quantity that denotes the strength of a solution; most often the strength of an acid or base between 0 and 12
- J. Vizualize
 - K. Molarity
 - L. Centrate
31. [To which forensic unit should a green leafy plant that was to be found trampled at a crime scene be sent?]
- A. Physical and Biological
 - B. Chemical and Physical
 - C. Biological
32. _____ techniques of thin-layer and gas are especially well suited to the needs of the drug analyst, because they separate drugs from their diluents while providing for their tentative identification.
- A. Mass Spectrometry
 - B. Van Urk
 - C. Chromatography
33. _____ spiral marks placed on the inside of a barrel to insure bullets will exit the barrel with a rotating motion.
- A. Striations
 - B. Caliper
 - C. Barium and Anatomy
34. Where is vitreous humor normally located?
- A. Inside the eye
 - B. Inside the mouth

C. inside the stomach

35. What do genes tell the cell to make?

- A. Traits
- B. Calcium
- C. **Proteins**

36. What is headspace?

- A. Screens for alcohol
- B. Screens for intelligence
- C. Screens for blood abnormalities

37. _____ portions of this is found on hands of a person who has fired a weapon.

- A. **Striations**
- B. Forgery
- C. Caliper

38. Where is a body stored before an autopsy?

- A. Placed in a refrigeration unit at the nearest police station.
- B. **It held in a refrigeration unit in the morgue**
- C. It is stored in a cooler with ice in the morgue

39. Signing another person's name to a check is an example of:

- A. Literary Forgery
- B. **Forgery**
- C. Honesty

40. _____ can readily separate a drug from other substances which may be present in the drug preparation, however, it suffers from the drawback of not being able to provide the analyst with a specific identification of the material under investigation

- A. Marquis
- B. **Mass Spectrometry**
- C. Microcrystalline Test

41. How many markers are typically used by labs?

- D. **13**
- E. 46
- F. 21

42. _____ glass tubes 6 to 10 mm in diameter and from 25 to 40 cm in length filled with layers of different densities.

- A. **Density-Gradient Tube**
- B. Radial Crack
- C. Soil

43. If a pistol and some ammunition was to be found at a crime scene, what kind of analysis should be performed?

- A. Visual and Chemical
- B. Comparison and Microscopic
- C. Origin and Comparison

44. Where are defensive wounds commonly found?

- A. hands, fingers and arms of the victim
- B. hands, fingers and feet of the victim
- C. [hands, fingers and arms of the perpetrator

45. What is an Autopsy?

- A. A way to test DNA, for abnormalities
- B. An exam requested by families for medical treatments
- C. A routine postmortem examination performed by a pathologist on a patient who has died.

46. [How is DNA packaged to fit into the small space of a cell nucleus?]

- A. They are packed into compact units called a gene
- B. They are packed into compact units called chromosomes
- C. They are squeezed into a trail]

47. _____ the part of a hair contained within the protective layer of the cuticle and made up of spindle-shaped cortical cells aligned in a regular array, parallel to the length of the hair.

- A. Shaft
- B. Cortex
- C. Cuticle

48. _____ he surfaces of the original bore remaining between the groves.

- A. Lands
- B. Caliper
- C. Groves

49. Which drug is this: implies a state of lethargy or sluggishness.

- A. Narcotics
- B. Hallucinogens
- C. Depressants

50. How long does an autopsy take?

- A. 4-6 weeks
- B. 4-6 days
- C. 4-6 months

51. What is the standard dress of a person while performing an autopsy?

- A. [a. Scrubs, hair net, glasses and rubber gloves
- B. Scrubs, gowns, two pairs of gloves, shoe covers, and a plastic face shield.
- C. Safety glasses, gloves, gown and mask

52. How are exit wounds different than entrance wounds?

- A. They are usually larger than entrance wounds.
- B. They are usually smaller than entrance wounds.]
- C. There are no differences

53. _____ the diameter of the gun barrel, measured between opposite Lands.

- A. Caliper
- B. Lands
- C. Groves

54. _____ is an appendage of the skin that grows out of an organ

- A. Shaft
- B. Cuticle
- C. Hair Follicle]

55. Each strand of DNA contains a sequence of bases (also called nucleotides). What are the four bases?

- A. adenine, guanine, cytosine and geranium
- B. adenine, thyme, cytosine and clove
- C. adenine, guanine, cytosine and thymine

56. The selective absorption of light by drugs in the UV and IR regions of the electromagnetic spectrum is _____.

- A. Spectrophotometry
- B. Chromatography
- C. Scott Test

57. [What kind of analysis should be performed with a suicide note found at a crime scene?]

- A. Comparison, Visual, Microscopic and Chemical
- B. Comparison, Visual and Biological
- C. Microscopic, Visual Physical and Origin

58. What is the approximate growth rate for hair?

- A. Approximately 4 centimeters per month.
- B. Approximately one centimeter per week
- C. Approximately one centimeter per month

59. Exemplar is..

- A. Handwriting guidelines
- B. A handwriting sample
- C. A handwriting comparison

60. Which drug is this: depressant action on the central nervous system?

- A. Narcotics
- B. Hallucinogens
- C. Depressants

61. _____ measures the diameter of the medulla relative to the diameter of the hair shaft, normally expressed as a fraction

- A. Medullary index
- B. Morphology
- C. Medulla

62. Two pieces of evidence, which would be the responsibility of the biology Science Unit.

- A. Paints and Soil
- B. Glass and Plants
- C. Wood and Plants

63. How long would the DNA in one human cell be?

- A. 3 meters long
- B. 3 centimeters' long
- C. 2 millimeters' wide]

64. _____ costs the United States between 10-14 million per year.

- A. Erasures
- B. Alterations and obliterations
- C. Check fraud and counterfeiting

65. Drugs that can cause marked alterations in normal thought processes, perceptions, and moods are:

- A. Narcotics
- B. Hallucinogens
- C. Depressants

True or False: For each statement, circle True or False.

- | | | |
|------|-------|---|
| True | False | 66. The shaft is composed of these three layers: Cuticle, Cortex, Medulla. |
| True | False | 67. Barbiturates are Depressants which create a feeling of well-being, relaxation, and induce sleep |
| True | False | 68. The Physical Science Unit is where you would send paint to. |
| True | False | 69. [Apples are smells that are associated with cyanide poisoning during an autopsy? |
| True | False | 70. By examining a bullet hole in a pain of glass it is possible to identify the size of the penetrating bullet. |
| True | False | 71. Groves are spiral marks placed on the inside of a barrel to insure bullets will exit the barrel with a rotating motion. |
| True | False | 72. Rat poison is a common substance that contains arsenic. |
| True | False | 73. You hope to get Origin and Composition from soil collected at a crime scene. |
| True | False | 74. Hydrochloric acid is HC3 |
| True | False | 75. For a concentric fracture, the perpendicular end always faces the surface on which the force originated. |
| True | False | 76. Any document that has been darkened by unknown causes is called |
| True | False | 77. Blood cannot be identified as coming from a male or female |
| True | False | 78. Deoxyribo Nucleic Acid is DNA |

- | | | |
|------|-------|---|
| True | False | 79. The Brain is washed with a solvent before Analysis |
| True | False | 80. VNTR stand for Variable Number Tandem Repeater. |
| True | False | 81. Concentric fracture lines form on the surface opposite that of the penetrating force. |
| True | False | 82. You can distinguish a hair that has been bleached or dyed from a natural hair? |
| True | False | 83. Humans have 2,400 genes |
| True | False | 84. CSI over sees Counterfeiting] |
| True | False | 85. Lands are portions of this is found on hands of a person who has fired a weapon. |

Fill in the Blank: Into each sentence below, copy a term from the word bank that correctly completes the sentence.

Asphyxiation	Centrifuge	Locus	Rifting	Stimulants
Biology	Concentric Cracks	Morphology	Serology	Stress Mark
Carbon Monoxide	Indented Writing	Obliterations	Spinal Cord	Tattooing

86. After the top of the skull is lifted off the **Spinal Cord** holds the brain in the head?
87. The **Biology** Unit is where you send blood to.
88. **Indented writing** occurs when an impression is left on sheets of paper that were below the original sheet of paper.
89. **Stress marks** are white fracture lines which are observed microscopically on a cross section of glass
90. **Stimulants are** drugs that stimulate the central nervous system.
91. **Centrifuge** is a machine which uses centrifugal force to separate a precipitate and a centrate.
92. A **Locus** is the specific location of a gene or DNA sequence or position on a chromosome.
93. **Obliterations** are made by using a chemical to remove the original text or by blacking out the original text completely.
94. **Asphyxiation** is the term given to blocking the airway so that the individual on the receiving end cannot breathe and ultimately dies.
95. **Carbon Monoxide** is a common toxic gas death?
96. **Concentric Cracks** are glass fractures lines which form on the same side as the penetrating force
97. **Serology** is the analysis of the properties and effects of serums.
98. **Morphology** remains the hairs most characteristic forensic feature?
99. **Tattooing** as it is sometimes referred to, is when the gunpowder will spray around the area of the wound and burn to the skin as it is hot on being fired from a weapon.
100. **Rifting** the impression of groves placed on the inner surface of a barrel.