

Crime Busters B - Crime Busters Practice 2 - Region 7 January Workshops - 01-16-2021

Following this introduction, you will be taking a sample practice test to help you learn to navigate taking a virtual Crime Busters test. This is not a full blown test but a sampling of a variety of types of questions on many of the topics in this event.

1. (1.00 pts) Identify the following powder/crystal by chemical name based on the following test results: became jelly-like when mixed with water.

Gelatin

2. (1.00 pts) Identify the following powder by chemical name based on the following test results: soluble in water (a little lumpy) and turned blue in iodine.

flour

3. (1.00 pts) Vitamin C has a pH of 5.

True False

4. (1.00 pts) Sodium Chloride can be identified by its hexagonal crystals.

True False

5. (1.00 pts) When iodine is added to this clear liquid, it bubbles. What is this liquid?

Hydrogen Peroxide

6. (1.00 pts) This metal is heavy and reacts with HCl, what is it?

Zinc

7. (1.00 pts) Identify the following hair: 

- A) Cat
 B) Human
 C) Dog
 D) None of the Above

8. (1.00 pts) Dog hairs contain ovoid bodies which distinguishes them from human and cat hairs.

True False

9. (1.00 pts) Identify the following category this fiber belongs to based on the following test results: shiveled, and smelled like burning hair.

- A) Vegetable
 B) Animal

- C) Synthetic
- D) None of the Above

10. (1.00 pts) A piece of plastic was tested with the following results: floated in water and sank in vegetable oil

- A) Polystyrene
- B) Polyvinyl Chloride
- C) Polyethylene Terephthalate
- D) Low Density Polyethylene
- E) Polypropylene
- F) High Density Polyethylene

11. (1.00 pts) Name 2 types of chromatography and what they are used for.

Expected Answer: Liquid--test water sample to look for pollution in lakes and rivers Gas--used to analyze volatile gasses--detect bombs, identify drugs, compare fibers Thin Layer--check for the purity of an organic compound, keeps pigments together better and easier determine Rf values, detects pesticides and insecticides residues in food Paper--test inks, histamines, antibiotics, RNA fingerprinting

12. (1.00 pts) In paper Chromatography, what is the stationary phase?

Paper

13. (1.00 pts) Whorls are the most common type of fingerprint.

- True
- False

14. (1.00 pts)

The following is an example of what kind of fingerprint?



- A) Whorl
- B) Loop
- C) Arch
- D) The correct answer is not listed.
- E) A and C
- F) B and C

15. (1.00 pts) What things can you tell from a footprint?

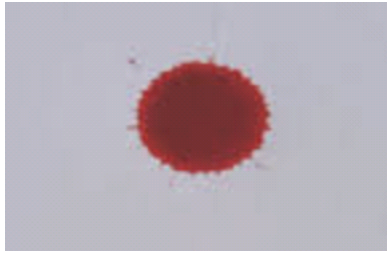
Expected Answer: Speed, direction, pattern on the bottom for identification

16. (1.00 pts) This type of soil is made up of large grains and contains no organic material.

17. (1.00 pts) This type of soil is comprised of 50% clay, 40% sand and 10% silt. Name the type of soil.

18. (1.00 pts)

The following is what kind of blood spatter:



- A) Medium Velocity Impact Spatter
- B) High Velocity Impact Spatter
- C) Arterial Spurt Spatter
- D) Low Velocity Impact Spatter
- E) Straight drop Spatter
- F) Both D and E

19. (1.00 pts) There can be multiple suspects to write about in the analysis.

- True False

20. (1.00 pts) In writing the analysis of the crime, you should list a possible motive for each culprit.

- True False

21. (1.00 pts) Ammonia has a pH of 10.

- True False

22. (1.00 pts) This liquid can be identified by its sweet smell and clear color.

23. (1.00 pts) This metal has a yellowish tinge and is not magnetic.

Tin

24. (1.00 pts) Polypropylene is abbreviated by the symbol _____ and has a density of _____.

PP

.90

25. (1.00 pts) Where can you find the cortex in a hair?

Expected Answer: It can be found in between the cuticle and the medulla.

I hope you found this helpful and learned a lot!