MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question. Please mark your answer in the space provided.

1) ______ The central canal running through many hairs is known as the:

2) ______ Which of the following is not a layer of the hair shaft?
   A) medulla B) cuticle C) follicle D) cortex

3) ______ Which feature of hair is MOST important in making a species comparison?
   A) scale pattern    B) bulb size
   C) follicle shape    D) shaft length

4) ______ The medullary index of human hair is ______ the medullary index for most other animals.
   A) greater than      B) the same as      C) less than

5) ______ Pigment granules that impart hair with color are found in the:
   A) medulla.   B) cuticle.
   C) cortex.    D) both A and B

6) ______ If a hair does not have a follicular tag, an expert witness is on best scientific footing when stating that:
   A) a suspect hair comes from a particular animal species.
   B) the hair in question comes from a 21-year-old.
   C) the given hair comes from a specific person.
   D) his examination reveals that the hair is that of a male.

7) ______ In determining whether a hair sample originated from a male or a female, the MOST important consideration is:
   A) whether the hair was dyed.
   B) whether the hair is bleached.
   C) the results of DNA analysis performed on the root structure.
   D) the length of the hair.

8) ______ Nuclear DNA typing can be most successfully accomplished on hairs that have been removed during which stage of growth?
   A) anagenic B) telogenic C) catagenic   D) mutagenic
9) ______ In what stage can a hair most readily be removed from the scalp?  
A) anagenic    B) telogenic C) analgesic D) catagenic

10) ______ The conviction Ennis Cosby's killer was aided by the DNA analysis on a hair that was crucial evidence in the case. This hair:  
A) belonged to Cosby and was found in the suspect's car.  
B) belonged to Cosby and was found clinging to the murderer's jacket.  
C) belonged to the killer and was found on the body of the victim.  
D) belonged to the killer and was found in his cap with which he had wrapped the murder weapon before discarding it.

11) ______ A cast of a hair surface can be made using:  
A) an SEM.    B) clear nail polish.  
C) softened vinyl.    D) both B and C

12) ______ Which was the first man-made fiber?  
A) nylon    B) rayon    C) polyester    D) acetate

The following are steps that can be taken in the examination of fibers for the purpose of identification and comparison:

1. examination of dye composition using visible light microspectrophotometer  
2. make a cross sectional view of the fibers  
3. microscopic examination for color and diameter of fibers  
4. infrared spectrophotometry  
5. study of the birefringence of the fibers  
6. TLC study of dyes in fibers

13) ______ Which step would produce "fingerprints" of the fibers?  
14) ______ Which step would involve determining the refractive index of the fibers?  
15) ______ Which step would achieve separation of the dyes taken from the fibers?

16) ______ Which is a true statement about the fibers in the Williams case?  
A) They were similar to the clothes Williams was known to wear.  
B) They were found on all the victims that were linked to Williams.  
C) The investigators did probability calculations to establish the chance of these fibers being found in a particular location.  
D) They were proven to come from Williams' bedroom.

17) ______ Which of the following properties should be examined when comparing two fibers?  
A) presence or absence of delustering particles  
B) diameter  
C) lengthwise striations  
D) all of the above
18) ______ By far the most prevalent plant fiber is:

19) ______ Which is NOT part of the composition of paint?
A) adhesive   B) binder   C) pigment D) solvent

20) ______ Paint binders can be chemically analyzed using:
A) TLC.   B) Pyrolysis GC.
C) IR spectrophotometry.   D) both B and C

21) ______ Paint as physical evidence is most frequently encountered in:
A) a hit-and-run. B) burglary.  
C) car theft.  D) both A and B

22) ______ Which property imparts paint with its most distinctive forensic characteristics?
A) gloss   B) color   C) color-layer sequence  D) texture

23) ______ Hit-and-run accidents may result in which type(s) of evidence?
A) glass   B) fibers   C) blood  D) all of the above

24) ______ The value of ridge patterns in determining the uniqueness of a fingerprint is _______ the value of type and position of ridge characteristics in determining the uniqueness of a fingerprint.
A) less than   B) the same as   C) greater than

25) _______ The number of deltas found in an arch pattern is _______ the number of deltas found in a loop pattern.
A) greater than   B) less than  C) the same as

26) ______ The fingerprint classification system used in most English speaking countries was devised by:

27) ______ AFIS is a(n):
A) assay technique used to identify drugs.
B) method used to determine age of a latent print.
C) computer system programmed to analyze hair.
D) computerized system for storing and retrieving fingerprint records.
28) _______ Prints impressed in a bar of soap are referred to as:
A) plastic.  B) dusted.  C) hidden.  D) latent.

29) _______ Prints that are not readily visible are commonly referred to as:
A) plastic.  B) open.  C) latent.  D) rolled.

30) _______ The most common ridge pattern is the:
A) arch.  B) loop.  C) whorl.  D) accidental.