
I- Choose the correct answer:

- 1- In sample collection and processing dry air used in order to?
- A- Prevent mold
 - B- Stop Nucleases
 - C- Allow bacteria growth
 - D- A and B**
 - E- A, B and C
- 2- Which of the following is not consider as sources of contact DNA sample
- A- Bones**
 - B- Cigarette butts
 - C- Postage stamps and envelope sealing flaps
 - D- Dandruff
 - E- chewing gum
- 3- Which of the following is consider as an advantage for DNA extraction by Phenol / Chloroform / Isoamyl alcohol (PCI)
- A- Yields high molecular weight DNA**
 - B- Time consuming
 - C- Hazardous chemicals
 - D- A and B
 - E- None of the above
- 4- Which of the following is correct for DNA extraction by FTA paper
- A- Cellulose-based storage paper**
 - B- Contains chemicals to increase nuclease activity and inhibit bacterial growth
 - A- Not stable at room temp for years
 - B- None of the above
 - C- All of the above
- 5- Which of the following is correct for Amplitaq Gold DNA polymerase
- A- Chemically modified
 - B- Inactive until heated
 - C- Modification falls off at high temperature
 - D- All of the above**
 - E- None of the above

II- Fill the brackets with true (T) for the correct sentences and false (F) for the incorrect ones.

- 1- In order to store sample for long time we keep in refrigerator at 4°C (**F**)
- 2- Most items of evidence will be collected in paper containers such as packets, envelopes, and bags. (**T**)

- 3- Any items which may cross contaminate with each other must be packaged separately. (T)
- 4- Bite marks are found many times in sexual assaults and can be matched back to the individual who did the biting. It need a forensic pathologist consultation . (F)
- 5- Allelic Ladders is an Artificial mixture of common alleles. (T)
- 6- In the USA, a core set of 18 STR markers are being used to generate a nationwide DNA database called the FBI Combined DNA index systems (CODIS). (F)

III Fill in the blank with the correct answer.

- 1- Forensic science is used to investigate criminal cases involving a victim such as
- Forensic science is used to investigate criminal cases involving a victim such as
 - Assault
 - Robbery
 - Kidnapping
 - Rape
 - Murder

2- What is Forensic Entomology?

- A field of biological study of insects to aid in legal investigations

3- In multiplex PCR primer pairs must have

- Similar annealing temperatures
- Sequences that won't form "p-d"

4- Repeated DNA are divided into, _____ Satellite DNA, _____ minisatellite DNA and Microsatellite DNA _____

5- The following STR are called

- agat agat agat agat agat

6- The following STR are called

- aatg aatg aatg aatg aatg aatg aatg aatg aatg aatg -
- aatg aatg aatg aatg aatg aatg atg aatg aatg aatg - !

7- C.S reconstruction involves a set of actions or stages mention these stages?

- C.S reconstruction involves a set of actions or stages:
 1. Data collection: all information obtained at the C.S from victim or witnesses is critical.
 2. Conjecture: possible explanation of the actions involved in the C.S may be formulated.
 3. Hypothesis formulation: interpretation of blood stain and evidence analysis will lead to the formulation of a reconstruction hypothesis.

4. **Testing; after hypothesis formulation further testing must be done to confirm or disprove the overall interpretation or specific aspects of the hypothesis.**
 - **This stage involved:**
 - A. **Comparison of sample collected at the C.S with known standard.**
 - B. **Microscopic examination.**
 - C. **Chemical analysis**
5. **Theory formulation: based on additional information that may be acquired during investigation about the condition of the victim or suspect, the activities of the individual involves, accuracy of witness account.**

8- Documentation includes the following tasks?

1. Note taking
2. Videography
3. Photography.
4. Sketching.