

Labs and Tools

Mod - 6 (Understanding Tools)

Objectives :-

- Hardware and Software tools
- Tool selection
- Tool validation
- Quality Assurance

Quality Assurance (QA)

- 1) QA is a principle that underpins every discipline in Forensic science
- 2) QA is defined as a well documented system or protocols used to assure the accuracy and the reliability of analytical results
- 3) Every DFLab must have a QA program
- 4) A QA program covers a wide array of ~~reports~~ subjects such as
 - A) Peer review of reports
 - B) Evidence Handling
 - C) Case documentation
 - D) training of Lab personnels
 - E) Others
- 5) A review process is divided into two types
 - A) Technical Review
 - B) Administrative Review

Technical Review :-

- * It is conducted by separate Examiners
- * It focus on the results and conclusions
- * It verifies the result of the DF Investigation
- * As reported by the original Examiners

Administrative Review?

- * An Administrative Review insures all current correctly completed paper work

6) Proficiency Testing

* In this testing an examiner's competency must be confirmed and documented on a regular basis

* proficiency testing is done to establish quality assurance

* They are four types of proficiency testing

A) Open test:

An analyst and technical support personnel are being tested. during ~~the~~ an open testing

B) Blind test:

An analyst or technical support personnel are not aware that they are being tested during blind testing operation

C) Internal test:

during an internal test, the test is conducted ~~the~~ by the home agency itself

D) External test:

during an external test, the test is conducted by an external or independent or impartial agency.

8) Explain the concepts of virtual Labs?

* to share the resources, ^{import} results of DFLab the concept of virtual lab is established.

* virtual labs or VLab may be located various geographical location of a state / states / countries / continents,

* Distributed DF Laboratories have many advantages such as

- a) cost saving
- b) Greater Access to more resources
- c) Access to diverse
- d) Greater Expertise
- e) Reduction of unnecessary duplication resources

- *) A virtual lab may run with examiner and the central evidence repository located in geographically separate locations
- *) virtual lab allows distinct role based access for examiners and others.
 - a) Full access to lab Examiners and managers
 - b) Restricted access to prosecutors, investigators and defence attorney
- *) A v Lab must ensure
 - a) Security (Robust integrity, Lab capable of avoiding an catastrophic consequences)
 - b) Performance (High internet connectivity)
 - c) Cost (startup cost must be affordable)

8) How to ensure Lab security?

- 1) Only authorized personnel are allowed to access critical areas of a lab such as examination stations, Evidence storage
- 2) Un authorized persons are ~~to~~ not allowed to enter the lab using keys, door, swipe cards ~~etc.~~, access cards etc.
- 3) To ensure lab security used digital solution such as swipe cards or access cards, digital solutions are better than physical solutions because with digital solution ~~an~~ automatic audit trail is created and automatic chain of custody is created, digital solutions are capable to lock each and every time and individual access to ~~re~~ restricted area
- 4) To ensure lab security alarm systems can be used
- 5) A v Lab must be secured in such a way that unauthorized access is avoided, risk of fire can be avoided, flooding is avoided.

6) to ensure lab security, we need to ensure that an evidence log book must be signed properly and log books in and out signature must be maintained properly.

7) To ensure network security of a lab internet routers bridge switch servers etc must be well protected via password antivirus, firewall and others. Any machine of a laboratory should not be connected with internet during the experiment.

8) Lab security must be anchored in such a way that if any ~~malware~~ malware arrives inside an evidence then it must be brought into light and the evidence must be examined so that it can be malware free.

Free.