

(Time: 2½ hours)

[Total Marks: 60]

N. B.: (1) All questions are compulsory.

(2) Make suitable assumptions wherever necessary and state the assumptions made.

(3) Answers to the same question must be written together.

(4) Numbers to the right indicate marks.

(5) Draw neat labeled diagrams wherever necessary.

(6) Use of Non-programmable calculator is allowed.

1. **Attempt any two of the following:** 12
  - a. Explain current State of Computer forensics and types of Computer forensics.
  - b. Explain the present scenario of Cyber forensics and steps involved in investigation process.
  - c. Explain the procedure and legal consideration while seizing Digital evidence during cyber forensics investigation.
  - d. Explain the role of first responder during cyber forensic investigation.
  
2. **Attempt any two of the following:** 12
  - a. Write and explain the components required to set up computer forensic lab.
  - b. Write and explain the Factors to be considered for strategic planning of laboratory for business.
  - c. What tools and techniques are commonly used in Locating and Gathering Evidence on a Windows Host?
  - d. Write and explain various data acquisition tools used in cyber forensics.
  
3. **Attempt any two of the following:** 12
  - a. Write and explain the role of Recycle bin in file Recovery and its limitations.
  - b. Write in brief how Recuva can be used to recover deleted files with its features.
  - c. Write and explain the main features of Forensic Tool Kit (FTK) with its uses in digital investigations.
  - d. Write a short note on steganography with its types.
  
4. **Attempt any two of the following:** 12
  - a. Explain the OSI Model and discuss how its layers are essential in network forensics.
  - b. Write and explain the function of Snort in network forensics and steps used to identify and investigate security threats.
  - c. Write and explain the advantages and disadvantages of wireless network.
  - d. Write a short note on Wireless Penetration testing.
  
5. **Attempt any two of the following:** 12
  - a. Write and explain the working of email system in brief
  - b. Write and explain phishing with how phishing can bypass two factor authentication.
  - c. Explain in brief of tracing email messages with importance in viewing and analyzing email headers.
  - d. What are the tools and techniques to investigate email messages.