

## **CE1.3-R4 : CYBER FORENSICS AND LAW**

**DURATION : 03 Hours**

**MAXIMUM MARKS : 100**

**Roll No. :**

**Answer Sheet No. :**

**Name of Candidate :** \_\_\_\_\_ ; **Signature of Candidate :** \_\_\_\_\_

### **INSTRUCTIONS FOR CANDIDATES :**

- Carefully read the instructions given on Question Paper, Answer Sheet.
- Question Paper is in English language. Candidate has to answer in English Language only.
- Question paper contains Seven questions. The Question No. 1 is compulsory. Attempt any FOUR Questions from Question No. 2 to 7.
- Parts of the same question should be answered together and in the same sequence.
- Questions are to be answered in the ANSWER SHEET only, supplied with the Question Paper.
- Candidate cannot leave the examination hall/ room without signing on the attendance sheet and handing over his/her Answer Sheet to the Invigilator. Failing in doing so, will amount to disqualification of Candidate in this Module/Paper.
- After receiving the instruction to open the booklet and before answering the questions, the candidate should ensure that the Question Booklet is complete in all respects.

**DO NOT OPEN THE QUESTION BOOKLET UNTIL YOU ARE TOLD TO DO SO.**

1. (a) Define Cyber Forensics and explain its role in modern investigations.  
(b) Describe the key rules of Computer Forensics.  
(c) Explain the importance of digital forensic laboratory accreditation standards.  
(d) What is Steganography ? How is it used in concealment techniques ?  
(e) Discuss the role of network forensics in identifying cybercriminal activities.  
(f) Explain the process of recovering deleted files and partitions in forensic investigations.  
(g) What are some common cyber forensic tools ? Briefly describe any two.

(7x4)

2. (a) Discuss the cyber forensics investigation process and the different steps involved.  
(b) Explain different types of cryptographic concealment techniques.  
(c) How do digital appliances (like washing machines or microwaves) play a role in cyber forensics ?

(6+6+6)

3. (a) Compare and contrast various digital forensic tools such as EnCase, Autopsy, and FTK.  
(b) Explain how forensic investigators analyze network traffic to detect cyber threats.  
(c) Discuss the significance of volatile data in forensic investigations.

(6+6+6)

4. (a) Describe the role of a Forensic Laboratory Manager and their responsibilities.  
(b) What are the key components of an effective Forensic Evidence Control Checklist ?  
(c) How do Standard Operating Procedures (SOPs) ensure quality assurance in forensic labs ?

(6+6+6)

5. (a) What are the different techniques for data hiding on NTFS file systems ?  
(b) Explain how forensic experts use Back-Track for forensic discovery and analysis.  
(c) What challenges do investigators face when dealing with spoofing and hijacked session attacks ?

(6+6+6)

6.
  - (a) Describe the process of digital evidence acquisition and duplication.
  - (b) Explain how privacy laws affect cyber forensic investigations.
  - (c) Discuss legal liabilities for mistakes made during forensic investigations.

**(6+6+6)**

7.
  - (a) Explain the role of hashing in ensuring the integrity of forensic evidence.
  - (b) What are the challenges faced when recovering deleted files in Linux vs. Windows ?
  - (c) Describe different examination and analysis tools used in cyber forensics.

**(6+6+6)**

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**SPACE FOR ROUGH WORK**