



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal-500043, Hyderabad

B.Tech VII SEMESTER END EXAMINATIONS (REGULAR) - DECEMBER 2023

Regulation: UG-20

DIGITAL FORENSICS

Time: 3 Hours

CSE (CYBER SECURITY)

Max Marks: 70

Answer ALL questions in Module I and II

Answer ONE out of two questions in Modules III, IV and V

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

MODULE – I

1. (a) Mention the various characteristics of computer forensics systems and their significance. Explain the legal concerns and privacy issues in computer forensics. [BL: Understand| CO: 1|Marks: 7]
- (b) Illustrate various types of forensics systems. Discuss computer forensics and its benefits in the context of cybercrimes. [BL: Understand| CO: 1|Marks: 7]

MODULE – II

2. (a) Write the process of computer image verification and authentication. Discuss the importance of e-duplication and preservation of digital evidence. [BL: Understand| CO: 2|Marks: 7]
- (b) Discuss the steps involved in conducting a digital forensics investigation. Explain the process of data recovery and evidence collection in computer forensics with the help of tools. [BL: Understand| CO: 2|Marks: 7]

MODULE – III

3. (a) Elucidate in detail about the techniques used to fight against macro threats in digital forensics. [BL: Understand| CO: 3|Marks: 7]
- (b) Outline the concept of computer forensics and its role in identifying electronic evidence. [BL: Understand| CO: 3|Marks: 7]
4. (a) Interpret how the understanding of file systems plays a crucial role in cyber forensics. [BL: Understand| CO: 4|Marks: 7]
- (b) Discuss the information warfare arsenal and tactics used by military. Describe the tactics of private companies in information warfare. [BL: Understand| CO: 4|Marks: 7]

MODULE – IV

5. (a) Outline the process of using arsenal and surveillance tools used in information warfare. [BL: Understand| CO: 5|Marks: 7]
- (b) Discuss the legal issues related to computer related crimes, including the first and fourth amendments. [BL: Understand| CO: 5|Marks: 7]

6. (a) Outline the concepts of identity theft and fraud in the context of organized crime. [BL: Understand| CO: 5|Marks: 7]
- (b) Explain the avenues of prosecution in government efforts against computer crimes or cyber crimes. [BL: Understand| CO: 5|Marks: 7]

MODULE – V

7. (a) Discuss the development of forensic capabilities in handling both digital and physical evidence. [BL: Understand| CO: 6|Marks: 7]
- (b) Illustrate the process of developing forensic capabilities in digital evidence processing. [BL: Understand| CO: 6|Marks: 7]
8. (a) Describe the usage of digital forensics tool kits and its specifications. Describe the process of searching and seizing with the help of tool. [BL: Understand| CO: 6|Marks: 7]
- (b) Identify the challenges in finding digital evidence in the process of investigation. Mention the issues and challenges faced in the field of digital forensics. [BL: Understand| CO: 6|Marks: 7]

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