VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

REG.NO.: 765

SLOT: E1

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING
CONTINUOUS ASSESSMENT TEST - I
WINTER SEMESTER 2025-2026

Programme Name & Branch	:	**B. Tech (CIS)**
Course Code and Course Name	:	**BCSE322L DIGITAL FORENSICS**
Faculty Name(s)	:	**Dr. D. JIM SOLOMON RAJA**
Class Number(s)	:	**VL2025260502152**
Date of Examination	:	**31.01.2026**
Exam Duration	:	**90 minutes** **Maximum Marks: 50**

General instruction(s):

- Answer **All** Questions
- Course Outcomes
  a. CO1- Understand the responsibilities and liabilities of a computer forensic investigator.
  b. CO2- Seize a computer from a crime scene without damage and follow the legal procedures and standards.

Q. No	Question	Module	Marks	CO	BL
1.	In December 2025, Mr. Arvind, a 40year old senior audit consultant working at a multinational financial services firm, began receiving persistent messages through an instant messaging platform demanding a large sum of money. The sender threatened to lodge false financial compliance complaints with regulatory authorities. Around the same time, a forged resignation letter bearing Mr. Arvind's name was circulated on professional networking groups, damaging his reputation. Additionally, multiple unauthorized login attempts were detected on the firm's financial management software that stored confidential client records. Following internal escalation, the matter was reported to the Cyber Crime Wing. As a digital forensic investigator, explain the step by step forensic investigation process, the categories of digital evidence to be collected, possible forensic findings, investigative actions, and the post incident recommendations.	1	10	1	4
2.	Ms. Priya, a 29 year old technical lead in a global software firm, began experiencing cyber harassment shortly after discontinuing a contractual engagement with a former consultant. She received extortion emails threatening to publish manipulated internal project files. Her personal contact details were leaked on public platforms, and multiple fake online accounts impersonating her were used to circulate misleading messages to coworkers and clients. In parallel, repeated unauthorized access attempts were detected on her official email and online banking accounts.	1	10	1	3

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	As a digital forensic professional, analyse the types of digital evidence that can be collected, suitable forensic tools for the investigation, possible findings, legal implications, and post incident preventive measures.				
3.	A national logistics firm began receiving frequent complaints about repeated billing, shipment delays, and questionable refund approvals across one of its regional hubs. A compliance review revealed inconsistencies in shipment records and irregularities in digital payment logs. During the internal inquiry, a senior operations executive with extensive system privileges attempted to erase transaction logs and executed secure deletion software on his company workstation. Based on this incident, analyse the fraudulent techniques involved, the digital forensic methods used to investigate the case, and the major findings and lessons derived from the investigation.	1	10	1	3
4.	In the context of emergency situations within enterprise networks, identify an appropriate digital evidence acquisition technique. Discuss the major challenges faced during rapid evidence collection in corporate environments and justify how the selected technique maintains forensic accuracy, data integrity, and reliability.	2	10	2	1
5.	Describe the different RAID architectures used in digital forensic environments with the help of schematic diagrams. Analyse the strengths and drawbacks of each RAID level and suggest the most appropriate RAID configuration for efficient and reliable forensic data management.	2	10	2	2

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