Name:

Enrolment No:

UPES
UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2019

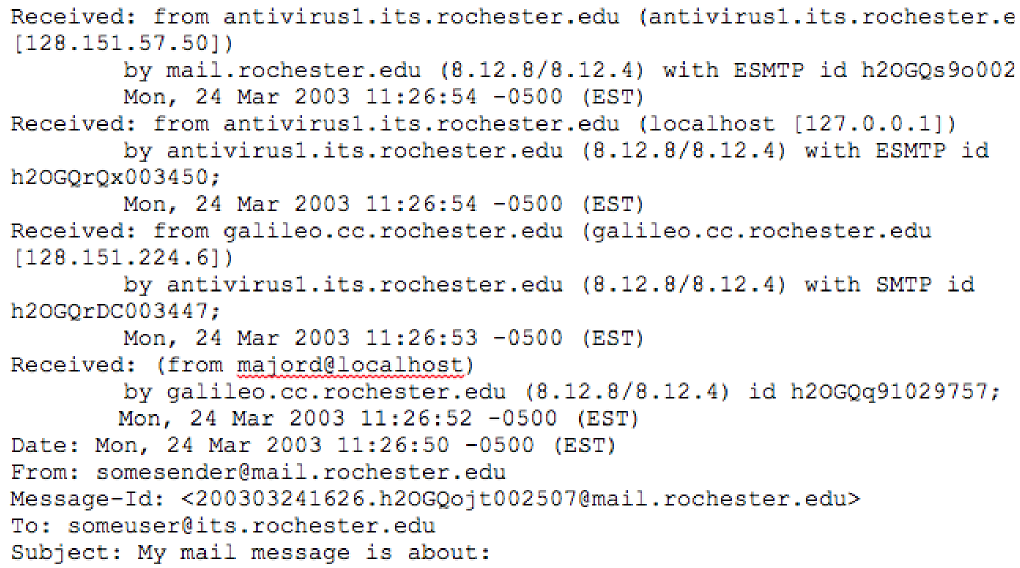
Course: Digital Forensics - I	**Semester: VI**
Program: B.Tech (CSE + CSF)	**Time 03 hrs.**
Course Code: CSIB 363	**Max. Marks: 100**

SECTION A

S. No.		Marks	CO
Q 1	Define the term 'Cybercrime'? In what perspective it is different from traditional criminal activity.	**04**	**CO5**
Q 2	You are a computer forensic examiner and want to determine whether a user has opened or double-clicked a file. What folder would you look in for a windows operating system artefact for this user activity? Support your answer with valid explanation.	**04**	**CO2**
Q 3	What all-volatile information, which you will collect before switching off the computer system. Also, explain its role in digital forensic investigation.	**04**	**CO4**
Q 4	Explain the functions of the following registry HKEYs: i. HKEY_CLASS_ROOT ii. HKEY_CURRENT_USER iii. HKEY_LOCAL_MACHINE iv. HKEY_CURRENT_CONFIG	**04**	**CO1**
Q 5	What is Windows Sysinternals? Explain TWO tools with their functionality that is present in Sysinternals.	**04**	**CO3**

SECTION B

S. No.		Marks	CO
Q 6	a) Describe the Order of Volatility? How it is helpful in performing digital investigation. [05] b) Demonstrate TCP/IP 3-way handshake with the help of a proper diagram. [05]	**10**	**CO2**
Q 7	a) How will you trace the crime, which has happened through email using a tool? [05] b) What information you can draw from the e-mail header given below: [05]	**10**	**CO3**



```
Received: from antivirus1.its.rochester.edu (antivirus1.its.rochester.e
[128.151.57.50])
        by mail.rochester.edu (8.12.8/8.12.4) with ESMTP id h2OGQs9o002
        Mon, 24 Mar 2003 11:26:54 -0500 (EST)
Received: from antivirus1.its.rochester.edu (localhost [127.0.0.1])
        by antivirus1.its.rochester.edu (8.12.8/8.12.4) with ESMTP id
h2OGQrQx003450;
        Mon, 24 Mar 2003 11:26:54 -0500 (EST)
Received: from galileo.cc.rochester.edu (galileo.cc.rochester.edu
[128.151.224.6])
        by antivirus1.its.rochester.edu (8.12.8/8.12.4) with SMTP id
h2OGQrDC003447;
        Mon, 24 Mar 2003 11:26:53 -0500 (EST)
Received: (from majord@localhost)
        by galileo.cc.rochester.edu (8.12.8/8.12.4) id h2OGQq91029757;
       Mon, 24 Mar 2003 11:26:52 -0500 (EST)
Date: Mon, 24 Mar 2003 11:26:50 -0500 (EST)
From: somesender@mail.rochester.edu
Message-Id: <200303241626.h2OGQojt002507@mail.rochester.edu>
To: someuser@its.rochester.edu
Subject: My mail message is about:
```

Q 8	Name three formats in which data is acquired. How Digital Evidence Acquisition is done and how it is authenticated?	**10**	**CO4**
Q 9	Discuss the legal aspects of Online Obscenity & Pornography according to Indian Cyber Laws? OR Discuss the legal aspects of Cyber Stalking and Defamation according to Indian Cyber Laws?	**10**	**CO5**
SECTION-C			
Q 10	Differentiate between the following: [5*4] a) FAT v/s NTFS file system structure b) IMAP v/s POP c) Volatile v/s Non-Volatile evidences d) Static IP v/s Dynamic IP e) TCP v/s UDP	**20**	**CO2** **CO4**
Q 11	State the term 'Messenger Forensics'? How it is useful in forensics investigations. Explain the working structure of Yahoo Messenger. OR State the term 'Web Browser Forensics'? What is the role of index.dat in forensics investigation? Explain about some tools used in Web Browser Forensics.	**20**	**CO3**

Name:

Enrolment No:

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2019

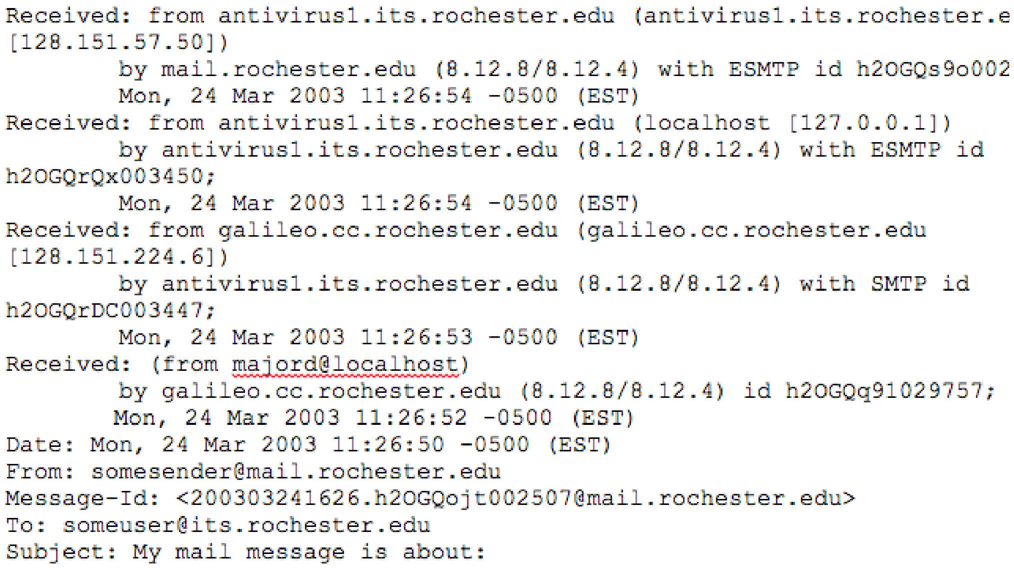
Course: Digital Forensics - I **Semester: VI**
Program: B.Tech (CSE + CSF) **Time 03 hrs.**
Course Code: CSIB 363 **Max. Marks: 100**

Instructions: All Questions are COMPULSORY. Internal choice is available in Q 9 and Q 11.

SECTION A

S. No.		Marks	CO
Q 1	Describe the term 'Slack Space'? Why it important from forensics point of view?	**04**	**CO1**
Q 2	Discuss the term 'Chain of Custody' and 'Order of Volatility' of evidence?	**04**	**CO2**
Q 3	How erased or damaged data is recovered?	**04**	**CO1**
Q 4	What is Windows Sysinternals? Explain TWO tools with their functionality that is present in Sysinternals.	**04**	**CO3**
Q 5	Explain the functions of the following registry HKEYs: i. HKEY_CLASS_ROOT ii. HKEY_CURRENT_USER iii. HKEY_LOCAL_MACHINE iv. HKEY_CURRENT_CONFIG	**04**	**CO1**

SECTION B

Q 6	Explain how Disk Imaging and preservation is achieved in Digital Forensics?	**10**	**CO1**
Q 7	a) How will you trace the crime, which has happened through email using a tool? [05] b) What information you can draw from the e-mail header given below: [05] 	**10**	**CO3**

```
Received: from antivirus1.its.rochester.edu (antivirus1.its.rochester.e
[128.151.57.50])
        by mail.rochester.edu (8.12.8/8.12.4) with ESMTP id h2OGQs9o002
        Mon, 24 Mar 2003 11:26:54 -0500 (EST)
Received: from antivirus1.its.rochester.edu (localhost [127.0.0.1])
        by antivirus1.its.rochester.edu (8.12.8/8.12.4) with ESMTP id
h2OGQrQx003450;
        Mon, 24 Mar 2003 11:26:54 -0500 (EST)
Received: from galileo.cc.rochester.edu (galileo.cc.rochester.edu
[128.151.224.6])
        by antivirus1.its.rochester.edu (8.12.8/8.12.4) with SMTP id
h2OGQrDC003447;
        Mon, 24 Mar 2003 11:26:53 -0500 (EST)
Received: (from majord@localhost)
        by galileo.cc.rochester.edu (8.12.8/8.12.4) id h2OGQq91029757;
       Mon, 24 Mar 2003 11:26:52 -0500 (EST)
Date: Mon, 24 Mar 2003 11:26:50 -0500 (EST)
From: somesender@mail.rochester.edu
Message-Id: <200303241626.h2OGQojt002507@mail.rochester.edu>
To: someuser@its.rochester.edu
Subject: My mail message is about:
```

Q 8	Describe TWO forensic tools which are used for creating forensics image of an evidence. Also name three formats in which data is acquired. Explain how validating and analysis of digital evidence is done.	**10**	**CO4**
Q 9	Discuss the legal aspects of Online Obscenity & Pornography according to Indian Cyber Laws? OR Discuss the legal aspects of tampering with computer documents and hacking according to Indian Cyber Laws?	**10**	**CO5**
SECTION-C			
Q 10	Differentiate between the following: [5*4] a) FAT v/s NTFS file system structure b) IMAP v/s POP c) Volatile v/s Non-Volatile evidences d) Static IP v/s Dynamic IP e) TCP v/s UDP	**20**	**CO2** **CO4**
Q 11	State the term 'Messenger Forensics'? How it is useful in forensics investigations. Explain the working structure of Yahoo Messenger. OR State the term 'Web Browser Forensics'? What is the role of index.dat in forensics investigation? Explain about some tools used in Web Browser Forensics.	**20**	**CO3**