

**SVKM's NMIMS**  
**MUKESH PATEL SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING /**  
**SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING**

**Academic Year: 2021-22**

Programme: B. Tech (Computer Science & Business Systems)      Year: III      Semester: VI

Subject: Information Security

Date: 06 April 2022

Marks: 100

Time: 10.00 am to 1.00 pm

Durations: 3 (hrs)

No. of Pages: 02

**Final Examination**

**Instructions:** Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.

- 1) Question No. 1 is compulsory.
- 2) Out of remaining questions, attempt any 4 questions.
- 3) **In all 5 questions to be attempted.**
- 4) All questions carry equal marks.
- 5) **Answer to each new question to be started on a fresh page.**
- 6) **Figures in brackets on the right hand side indicate full marks.**
- 7) **Assume Suitable data if necessary.**

<b>Q1</b>		Answer briefly:	[20]
CO1 ; SO2 ; BL-II	a.	Describe Security Life cycle with neat diagram.	[5]
CO2 ; SO1 ; BL-II	b.	Explain any five types of viruses.	[5]
CO3 ; SO1 ; BL-II	c.	Express confinement problem with suitable example.	[5]
CO4 ; SO1 ; BL-II	d.	Which factors can make data sensitive? Explain in brief.	[5]
<b>Q2</b>			
CO1; SO2; BL-IV	a.	State importance of access control models and illustrate any three types of access control models.	[10]
CO1; SO2; BL-II	b.	Describe any five types of biometric traits with their advantages and limitations.	[10]
<b>Q3</b>			
CO2; SO1; BL-IV	a.	Appraise any two types of non-malicious program errors with suitable examples. <i>Buffer Overflow ToC ToU</i>	[10]
CO1; SO2; BL-II	b.	Explain importance of Confidentiality and Integrity policies with suitable examples.	[10]

<b>Q4</b> CO3; SO1; BL-V	a.	What is meant by Life Cycle assurance? Summarize Waterfall Life Cycle Model of assurance.	[10]
CO3; SO1; BL-V	b.	Analyze different threats and controls to data privacy.	[10]
<b>Q5</b> CO4; SO1; BL-V	a.	What are different ways to infer sensitive data from non-sensitive data? Suggest Controls for statistical Inference attacks.	[10]
CO4; SO1; BL-III	b.	Write down the steps for Analysis of Security in Linux/Windows using any software tool.	[10]
<b>Q6</b> CO1; SO2; BL-III	a.	Demonstrate challenge response protocol with suitable example and advantages.	[10]
CO3; SO1; BL-II	b.	Discuss the importance of Intrusion Detection Systems(IDS). Explain any two types of IDS in detail.	[10]