Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations – May/June 2026

Date: 14 – 05- 2026 **Time:** 01:00pm – 04:00pm

School: SOCSE	**Program:** Cyber Security	
Course Code: CCS2502	**Course Name:** Cyber Threats for IoT and Cloud	
Semester: VI	**Max Marks**: 100	**Weightage**: 50%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	24	14	24	24	14

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks. **10Q x 2M=20M**

1.	Write the basic definition of IoT	**2 Marks**	**L1**	**CO1**
2.	Define Rf Sensors, LDR Sensors	**2 Marks**	**L1**	**CO1**
3.	List the common sources of cyber threats	**2 Marks**	**L1**	**CO2**
4.	What do you mean by Social Engineering Attacks	**2 Marks**	**L1**	**CO2**
5.	List the significant threats to IoT devices	**2 Marks**	**L1**	**CO3**
6.	What is a digital attack surface? What is a physical attack surface?	**2 Marks**	**L1**	**CO3**
7.	What are side-channel attacks in IoT devices?	**2 Marks**	**L1**	**CO4**
8.	Define cloud misconfiguration	**2 Marks**	**L1**	**CO4**
9.	How do insider threats affect cloud computing systems?	**2 Marks**	**L2**	**CO5**
10.	Why are cybersecurity threats a concern in cloud computing?	**2 Marks**	**L2**	**CO5**

Part B

Answer the Questions. **Total Marks 80M**

11.	**a.**	Explain how an IoT platform works with suitable examples.	**10 Marks**	**L2**	**CO1**
	b.	Describe the cloud computing reference model and classify the types of cloud computing with examples.	**10 Marks**	**L2**	**CO1**
		Or			
12.	**a.**	Discuss the types of cloud deployments and their features.	**10 Marks**	**L2**	**CO1**
	b.	While using public Wi-Fi, a user notices unusual account activity even though no credentials were shared intentionally. Explain how data may have been compromised and suggest methods to prevent such risks.	**10 Marks**	**L2**	**CO1**

13.	**a.**	A government agency identifies a long-term security breach where confidential data has been covertly accessed and transferred to an external source using sophisticated malware, without being detected. Examine the scenario and discuss the possible methods used to carry out cyber espionage. Recommend suitable strategies to detect and prevent such incidents.	1**0 Marks**	**L3**	**CO2**
	b.	Examine how WannaCry propagated across networks, identify the key vulnerabilities it exploited, and recommend appropriate preventive measures to protect systems from similar ransomware attacks.	**10 Marks**	**L3**	**CO3**
		Or			
14.	**a.**	Critically analyze how supply chain attacks are carried out. Examine the different types of supply chain attacks and assess their impact on organizational security and critical infrastructure. Propose comprehensive strategies for detecting, preventing, and mitigating these threats.	**10 Marks**	**L3**	**CO2**
	b.	Analyze how the zero-day attack could occur, discuss its impact, and suggest suitable measures to detect and prevent such attacks.	**10 Marks**	**L3**	**CO3**

15.	**a.**	Discuss how data encryption protects IoT systems from vulnerabilities. Suggest appropriate encryption techniques for both data at rest and data in transit in IoT systems.	1**0 Marks**	**L3**	**CO3**
	b.	Examine how vulnerabilities in firmware can be exploited. Propose secure firmware development and update practices to protect IoT devices.	**10 Marks**	**L3**	**CO4**

Or					
16.	**a.**	Identify and describe important IoT security guidelines. Propose how an organization can implement these guidelines to ensure secure IoT deployment	**10 Marks**	**L3**	**CO3**
	b.	Explain the concept of IoT gateway security. Apply suitable security mechanisms to protect data and devices connected through an IoT gateway	**10 Marks**	**L3**	**CO4**

17.	**a.**	Define Identity-First Security and outline its main components	1**0 Marks**	**L2**	**CO4**
	b.	What is unauthorized use of cloud workloads? Describe its causes and risks	**10 Marks**	**L2**	**CO5**
Or					
18.	**a.**	Define insecure APIs and explain how they can lead to data breaches	**10 Marks**	**L2**	**CO4**
	b.	Explain the concept of reduced infrastructure visibility in cloud computing.	**10 Marks**	**L2**	**CO5**