



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.														
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End - Term Examinations – MAY 2025

Date: 29-05-2025

Time: 09:30 am – 12:30 pm

School: SOCSE	Program: B. Tech in Computer Science & Engineering	
Course Code : CSE3034	Course Name: Big Data Security and Privacy	
Semester: VI	Max Marks: 100	Weightage: 50%

CO - Levels	C01	C02	C03	C04
Marks	6	26	38	30

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.	Outline the role does the krb5.conf file play?	2 Marks	L1	C01
2.	List the key components of the Kerberos protocol.	2 Marks	L1	C03
3.	Describe the three main roles in Kerberos authentication?	2 Marks	L1	C01
4.	Define what a Ticket Granting Ticket (TGT) is in Kerberos.	2 Marks	L1	C02
5.	Name at least three Hadoop ecosystem components that support Kerberos-based authentication.	2 Marks	L1	C02
6.	State what is a Key Distribution Center (KDC) in Kerberos?	2 Marks	L1	C02
7.	Outline the default authentication mechanism in Hadoop before Kerberos is implemented?	2 Marks	L1	C03
8.	List the default port used by the Kerberos KDC?	2 Marks	L1	C03
9.	Define which configuration files are necessary for enabling Kerberos in Hadoop?	2 Marks	L1	C01
10.	Describe what is a service principal in the context of Hadoop and Kerberos?	2 Marks	L1	C03

Part B

Answer the Questions.

Total Marks 80M

11.	a.	Classify how do you evaluate the risk of an employee using personal devices for work in detail ?	10 Marks	L3	CO 4
Or					
12.	a.	Employ the scenario in which a SQL injection attack is used to extract sensitive database information—what failed controls allowed it? Explain in detail	10 Marks	L3	CO 4
13.	a.	Review An employee downloads a large number of files before resigning—how would you detect and respond? Discuss in detail	10 Marks	L2	CO 3
Or					
14.	a.	Explain in detail where a remote worker copies sensitive files to a personal cloud storage—how can this be monitored?	10 Marks	L2	CO 3
15.	a.	Illustrate in detail If two-factor authentication is optional, what vulnerability exists?	10 Marks	L3	CO 2
Or					
16.	a.	Employ a critical database is exposed through a misconfigured firewall—how would you assess the overall risk?	10 Marks	L3	CO 2
17.	a.	Examine Social engineering tricks an employee into revealing internal IP ranges—what could this lead to?	10 Marks	L3	CO 2
Or					
18.	a.	Use what security controls would prevent both insider threats and external breaches?	10 Marks	L3	CO 2
19.	a.	Describe if your website becomes unresponsive during a product launch—how do you determine if it's a DoS attack?	20 Marks	L2	CO 3
Or					
20.	a.	Explain if your email server starts rejecting connections—how do you handle a DoS affecting communication channels?	20 Marks	L2	CO 3
21.	a.	Employ if a developer forgot to remove hardcoded credentials before deployment—how could this lead to unauthorized access?	20 Marks	L3	CO 4
Or					
22.	a.	Determine how could a phishing email lead to unauthorized access in a corporate network?	20 Marks	L3	CO 4