Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations – May / June 2026

Date: 20- 05-2026 **Time:**01:00pm – 04:00pm

School: SOCSE (spl)	**Program**: B-Tech,-CSE(CCS)	
Course Code: CCS2507	**Course Name:** WEB SECURITY	
Semester: VI	**Max Marks**: 100	**Weightage**: 50%

CO - Levels	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Marks	**24**	**24**	**26**	**26**	

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.	Define input validation	**2 Marks**	**L1**	**CO1**
2.	Differentiate between blacklist and whitelist validation	**2 Marks**	**L2**	**CO1**
3.	What is two-factor authentication?	**2 Marks**	**L2**	**CO2**
4.	List any two password attacks	**2 Marks**	**L2**	**CO2**
5.	What is session hijacking?	**2 Marks**	**L2**	**CO3**
6.	List the ways to prevent Cross-Site Scripting (XSS)	**2 Marks**	**L2**	**CO3**
7.	What is the Same-Origin Policy in browsers?	**2 Marks**	**L2**	**CO3**
8.	Give an example of an SQL injection and its impact.	**2 Marks**	**L2**	**CO4**
9.	What is a cookie-based attack?	**2 Marks**	**L2**	**CO4**
10.	Explain the concept of forceful browsing.	**2 Marks**	**L2**	**CO4**

Part B

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

11.	**a.**	Describe how client-side controls are used and how they can be bypassed?	**10 Marks**	**L2**	**CO1**
	b.	Explain blacklist and whitelist validation with suitable examples	**10 Marks**	**L2**	**CO1**
		Or			
12.	**a.**	Explain in detail about URL encoding, HTML encoding, Unicode encoding, Base64 encoding, and Hex encoding.	**10 Marks**	**L2**	**CO1**
	b.	Describe how an attacker can exploit insecure URL parameters. What are the techniques can be used to protect web applications from parameter tampering?	**10 Marks**	**L2**	**CO1**

13.	**a.**	Explain the advantages and disadvantages of implementing SSO in enterprise applications. How can it be made more secure?	**10 Marks**	**L2**	**CO2**
	b.	Discuss the importance of password hashing and salting in secure authentication systems.	**10 Marks**	**L2**	**CO2**
		Or			
14.	**a.**	Explain a case where credentials are sent over HTTP. How can Wireshark help intercept and analyze such sensitive data? Demonstrate with a practical example.	**10 Marks**	**L2**	**CO2**
	b.	Explain methods to secure authentication processes.	**10 Marks**	**L2**	**CO2**

15.	**a.**	A web application generates predictable session IDs, allowing attackers to hijack user sessions. **Explain session token generation and handling in this scenario**.	**10 Marks**	**L2**	**CO3**
	b.	An employee accesses restricted admin pages by directly entering URLs in the browser. **Explain access control and its importance in preventing such issues.**	**10 Marks**	**L2**	**CO3**
		Or			
16.	**a.**	A user clicks on a malicious link and unknowingly performs actions on a trusted website, while another site injects scripts into a webpage. **Explain CSRF and XSS attacks based on this situation.**	**10 Marks**	**L2**	**CO3**

	b.	A web application generates predictable session IDs, allowing attackers to hijack user sessions. **Explain session token generation and handling in this scenario.**	**10 Marks**	**L2**	**CO3**

17.	**a.**	A website displays user-generated content without proper sanitization, allowing attackers to inject malicious scripts. **Apply suitable methods to identify and prevent vulnerabilities in this situation.**	**10 Marks**	**L3**	**CO4**
	b.	A server executes system-level commands based on user-supplied input, which leads to exploitation by attackers. **Apply appropriate security measures to prevent OS command injection in this context.**	**10 Marks**	**L3**	**CO4**
		Or			
18.	**a.**	A web application allows users to modify file paths and access sensitive files on the server. **Apply techniques to prevent directory traversal attacks in this scenario.**	**10 Marks**	**L3**	**CO4**
	b.	A web application suffers from logic flaws where users can bypass payment steps and access premium services. **Apply methods to identify and mitigate application logic flaws in this scenario.**	**10 Marks**	**L3**	**CO4**