

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2026*****Sixth Semester******Computer Science and Engineering*****CCS374 – WEB APPLICATION SECURITY****(Common to Information Technology & Artificial Intelligence and Data Science)*****Regulations - 2021******Duration : 3 Hrs******Maximum : 100 Marks******PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)***

<i>Q.No</i>	<i>Questions</i>	<i>BTL</i>	<i>CO</i>	<i>Marks</i>
1.	Define Software security.	L2	1	2
2.	List the use of input validation.	L1	1	2
3.	What are the advantage of implementing security in web applications.	L1	2	2
4.	Define SAMM.	L2	2	2
5.	List any two types of authentication.	L1	3	2
6.	Show audit log.	L2	3	2
7.	List any two vulnerability assessment tools.	L1	4	2
8.	Mention the use of wireless testing.	L2	4	2
9.	Identify the purpose of hacking.	L2	5	2
10.	List any two tools used for hacking.	L1	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11. a	Explain the working of major web application security threats and its impact on users and organizations.	L2	1	16
	Or			
b	Explain the threats related to session management and elaborate its importance in preventing attacks.	L2	1	16
12. a	Discuss the key components Security Incident Response Plan (SIRP) for a web application.	L2	2	16
	Or			
b	Discuss the role of OWASP Comprehensive Lightweight Application Security Process(CLASP) in securing web applications.	L2	2	16
13. a	Illustrate how you would lock down network connections between micro services to prevent unauthorized communication and mitigate risks like man-in-the-middle (MitM) attacks.	L4	3	16
	Or			
b	Implement an API key-based solution for service-to-service communication, detailing the key management process (e.g., generating, storing, and rotating API keys) and how to ensure security when services communicate over the network.	L4	3	16

14.	a	i	Describe the phases of vulnerability assessment lifecycle.	L2	4	8	
		ii	Compare cloud based and host based vulnerability scanners.	L3	4	8	
	Or						
	b	i	Explain the benefits and challenges faced by penetration testing.	L2	4	8	
		ii	Compare external penetration testing and web application penetration testing.	L3	4	8	
15.	a	You are a cybersecurity consultant hired by a financial institution to assess their web application and provide recommendations to enhance security. During the assessment, you identify several potential vulnerabilities, including social engineering and Cross-Site Scripting (XSS). Provide a detailed security plan addressing both social engineering and XSS vulnerabilities, with actionable steps the organization can take to improve its overall security posture.			L5	5	16
	Or						
	b	You have been hired by an e-commerce company to assess the security of their online platform. After performing a vulnerability assessment and penetration test, you uncover multiple security issues, including broken authentication, improper session management, and insecure cryptographic storage. Provide a comprehensive remediation plan for the organization, addressing these three vulnerabilities and outlining best practices for secure authentication, session management, and cryptographic storage.			L5	5	16
