Register Number:……..

KUMARAGURU
college of technology
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B.E/B.TECH DEGREE EXAMINATIONS: NOV/DEC 2023

(Regulation 2018)

Seventh Semester

INFORMATION SCIENCE AND ENGINEERING

U18ISE0012 : Software security

COURSE OUTCOMES

CO1: Understand the need for software security by survey of current vulnerabilities and attacks.

CO2: Differentiate between traditional and secure software requirements and design.

CO3: Understand secure coding best practices and methods of analyzing.

CO4: Understand the importance of security testing and how it impacts the quality of software.

CO5: Understand the importance of secure installation, deployment and manage security incidents.

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	Recall code injection.	CO1	[K_1]
2.	What does session hijacking do? Give an example.	CO1	[K_2]
3.	Compare internal and external sources for security requirements.	CO2	[K_2]
4.	State the principles of Defense in Depth.	CO2	[K_1]
5.	What do you mean by declarative security?	CO3	[K_1]
6.	Infer the need of static analysis in secure software analysis.	CO3	[K_2]
7.	What do you mean by fuzzing in secure software testing?	CO4	[K_1]
8.	List the guidelines for software acceptance.	CO4	[K_1]
9.	Identify the types of operational controls in software development.	CO5	[K_2]
10.	List the common security incidents?	CO5	[K_1]

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.	a)	Outline the need of memory safety and compare spatial memory safety and temporal memory safety.	8	CO1	[K_2]

	b)	Illustrate the concept of Cross Site Scripting with an example.	8	CO1	[K_2]
12.	a)	What are authentication requirements? Organize the common forms of authentication.	8	CO2	[K_1]
	b)	Identify the principles to perform the secure software design.	8	CO2	[K_2]
13.	a)	Assess the most common software security vulnerabilities in software development.	8	CO3	[K_3]
	b)	Justify the need of symbolic execution for software security with an example.	8	CO3	[K_2]
14.	a)	Analyze the steps involved in Pen testing process with its uses.	8	CO4	[K_3]
	b)	Categorize the types of functional testing briefly.	8	CO4	[K_4]
15.	a)	List and explain the software acceptance consideration when building software.	8	CO4	[K_2]
	b)	Explain the working of Cross Site Request Forgery (CSRF) with examples.	8	CO1	[K_2]
16.	a)	Explain the terms hardening and bootstrapping in software installation.	8	CO5	[K_2]
	b)	Identify the primary ways through which monitoring is accomplished within the organizations and explain.	8	CO5	[K_2]

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