

School of Computing Science and Engineering

Bachelor of Technology in Computer Science and Engineering
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem VI - R1UC607C - Secure Software Engineering

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) What are some common tools and techniques used for conducting code analysis in software development? K1(2)
- 2) Define Low level design and High level design? K2(4)
- 3) Discuss the potential consequences of these threats and sources on the security. K2(6)
- 4) How do confidentiality, integrity, and availability contribute to the overall security posture of software systems? K3(9)
- 5) Why Requirements prioritization plays the crucial role while developing the secure software? K3(9)
- 6) Explain the concept of "security by design" and its relevance to software engineering. K5(10)
- 7) How can stakeholders collaborate to identify and prioritize the desired security properties for a software system? K4(12)
- 8) Explain some methods which can influence the properties of a software : Secure software? K5(15)
- 9) Explain the role of standards and protocols in facilitating seamless integration during system assembly. K5(15)
- 10) Suppose you are given the following requirements for a simple database for the National Hockey League (NHL):
 - the NHL has many teams,
 - each team has a name, a city, a coach, a captain, and a set of players,
 - each player belongs to only one team,
 - each player has a name, a position (such as left wing or goalie), a skill level, and a set of injury records,
 - a team captain is also a player,
 - a game is played between two teams (referred to as host_team and guest_team) and has a date (such as May 11th, 1999) and a score (such as 4 to 2). Construct a clean and concise ER diagram. List your assumptions as well as any role indicators in your ER diagram.K6(18)