Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Eighth Semester B.Tech Degree (S, FE) Examination May 2024 (2015 Scheme)
Course Code: CS472
Course Name: PRINCIPLES OF INFORMATION SECURITY

Max. Marks: 100   Duration: 3 Hours

PART A
Answer all questions, each carries 4 marks.
                                                         Marks

1   List the components of an information system.   (4)

2   Explain the concept of deliberate software attack.   (4)

3   Describe integrity policies for Biba model.   (4)

4   List impact of Buffer Overflow Vulnerability.   (4)

5   Explain the remedies to prevent SQL injection.   (4)

6   Explain about code red worms.   (4)

7   List the attacks on WLAN.   (4)

8   Discuss the different types of 802.11 modes.   (4)

9   Explain SAML.   (4)

10   Describe XML encryption.   (4)

PART B
Answer any two full questions, each carries 9 marks.

11   a)   Explain Threats and its categories.   (6)

      b)   Define Trojan horse and its types.   (3)

12   a)   How discretionary access control mechanism and mandatory access control mechanism works?   (6)

      b)   Give the operations in Bell-LaPadula (BLP) models.   (3)

13   a)   How Chinese wall model works? Clarify with the help of a neat diagram.   (5)

      b)   Explain the certification rules in Clark-Wilson Integrity Model.   (4)

PART C
Answer any two full questions, each carries 9 marks.

14   a)   Explain any two instances where a site is vulnerable to SQL Injection.   (6)

      b)   Discus how buffer overflow vulnerability be prevented.   (3)

15   a)   Describe software vulnerability and explain are the common types of software flaws that lead to vulnerability.   (5)

      b)   Explain topological worms.   (4)

16   a)   Differentiate between Kermack-McKendrick Model and Simple Epidemic Model.   (5)

b) Explain the life cycle of a computer virus. (4)

PART D
Answer any two full questions, each carries 12 marks.

17 a) Explain GSM architecture with a neat diagram. (6)

b) Explain authentication and key agreement in UMTS with a neat diagram. (6)

18 a) Describe how Bluetooth protocol works and list the different bluetooth protocols in the protcol stack. (6)

b) How SWOT analysis of electronic banking systems is conducted? (6)

19 a) Explain with neat representation the sequence of events that are required for a transaction in secure electronic transaction (SET). (8)

b) Explain the types of e- payments. (4)

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