Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐ **Total No. of Pages : 02**

Total No. of Questions : 09

B.Tech. (CSE/ Internet of Things and Cyber Security including Block Chain Technology) (Sem.–6)

IOT SECURITY

Subject Code : BTITCS608-20

M.Code :93423

Date of Examination : 20-05-2025

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION - A

1. Write briefly :

a) What does IoT stand for?

b) Name one layer in the IoT architecture.

c) Give an example of a functional architecture component in IoT.

d) What is threat modeling in the system analysis?

e) When is hardware typically considered "in scope" for threat modeling?

f) Define dynamic analysis in the context of security assessment.

g) What is the significance of trust and security from a device perspective in IoT?

h) Define secure key storage in the context of lQT security.

i) What are wireless systems?

j) Define biological networks.

SECTION - B

2. Discuss the potential impact of applied physical attacks on IoT devices and methods for passive analysis to detect such attacks.

3. Outline the key components of a PKI architecture and their roles in establishing secure communication in IoT networks.

4. Discuss the significance of wireless systems in the modern communication and their impact on society.

5. Describe the importance of trust and security from a device perspective in ensuring the integrity of IoT ecosystems, including methods to achieve this.

6. Compare and contrast static and dynamic analysis tools, discussing their respective strengths and weaknesses in vulnerability assessment.

SECTION - C

7. Describe in detail the architecture of an IoT system, including the role of each layer and how they interact with each other.

8. Explain in detail the process of dynamic analysis, including its application in circuit analysis versus emulation environments. Highlight key differences and considerations for each approach.

9. Design a public key reference infrastructure tailored for IoT applications, covering aspects such as certificate issuance, revocation and management, with a focus on scalability and security.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.