PAPER ID-311125

Roll No: | | | | | | | | | | | | | |

BTECH
(SEM V) THEORY EXAMINATION 2023-24
PRIVACY AND SECURITY IN IOT

TIME: 3 HRS   M.MARKS: 100

Note: **1.** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1.   **Attempt *all* questions in brief.**   **2 x 10 = 20**

Q no.	Question
a.	Define Authentication and Authorization.
b.	What are the functions of secret key cryptography?
c.	What is the size of Hash Value?
d.	Is a random number generator truly random? Or are the random numbers generated by a hidden algorithm?
e.	Why is publish subscribe model preferred for IoT applications?
f.	Which technology is used in access control?
g.	What are the concerns of data dissemination?
h.	Which privacy risk is common during personal data collection?
i.	How is cloud different from traditional data centers?
j.	What are the security benefits of cloud computing?

SECTION B

2.   **Attempt any *three* of the following:**   **10x3=30**

a.	Explain Security Architecture on the IoT. Give some attacks specific to IoT.
b.	What is the significance of MQTT as a messaging protocol in IoT service?
c.	Explain different methods, which are used to provide strong authentication in IoT devices?
d.	What measures are designed to prevent unauthorized access?
e.	How does the IoT platform monitor and control connected devices?

SECTION C

3.   **Attempt any *one* part of the following:**   **10x1=10**

a.	Describe the process of security transmitting authentication tokens between a client and a server.
b.	What is some design consideration that can prevent against improper authorization vulnerability?

4.   **Attempt any *one* part of the following:**   **10x1=10**

a.	Define cryptographic controls built into IoT messaging and communication protocol.
b.	What is IoT node authentication? How can IoT devices be utilized to verify the authenticity and integrity of data?

5.   **Attempt any *one* part of the following:**   **10x1=10**

a.	Explain all access management solution for IoT in detail.
b.	(i) What are the possible attacks on IoT devices? (ii) What are the activities involved in the security testing of IoT products?

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6. **Attempt any *one* part of the following:**   10x1=10

a.	How trust is enabled in IoT? How many components are there in trust?
b.	Explain a few lightweight and robust schemes for IoT privacy protection.

7. **Attempt any *one* part of the following:**   10x1=10

a.	(i) What type of IoT data analytics are available? Explain in detail. (ii) How do IoT devices communicates with cloud?
b.	What are the architectural considerations in cloud?