National Forensic Sciences University
School of Cyber Security and Digital Forensics

Course Name: M.Sc. Cyber Security / M.Sc. Digital Forensics & Information Security **Semester - III**

Subject Code: CTMSCS SIII P2 / CTMSDFIS SIII P2 **Time:** 3.30 PM to 5.00 PM

Subject Name: IoT Security & Forensics

Exam: Mid Semester Examination (October - 2023) **Date:** 31-10-2023

Q - 1. Answer the following questions in short. (Attempt any 5) **[25 Marks]**

1) Explain MQTT in detail with suitable example.

2) Give an example in which Big Data Analytics will solve potential problem.

Write challenges in Big Data Analytics.

3) An IoT based temperature control system consist of an temperature sensor and a relay to actuate Air Conditioner. Write a program to read temperature input; compare it with suitable threshold value and if it is greater than threshold value then AC should be turned ON.

4) Enlist IoT challenges and explain in brief.

5) Differentiate between IPv4 & IPv6.

6) What is NFV? What are its applications?

Q - 2. Answer the following questions in detail. (Attempt any 2) **[16 Marks]**

1) What do you mean by M2M? Write difference between IoT & M2M.

2) Define Simple Network Management Protocol. Explain its architecture in detail. What are its limitations? How it can be resolved?

3) What is Software Defined Networking? Draw its architecture and explain each component in detail.

Q - 3. Answer the following question in brief. (Attempt any 3) **[09 Marks]**

1) Give classification of sensors used in IoT based on quantity to be sensed.

2) Explain CoAP protocol in brief.

3) What is XMPP. White its features and application area.

4) Which Arduino functions are used for Digital Input – Output and Analog Input – Output operations? Explain with suitable example.

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