Developing and Securing the Cloud, Edge and IoT
Exam #1 (CS 6301); Summer 2024
Take Home Exam
Main 8 Questions are Mandatory
Each Main Question is worth 10 points
Two additional extra credit questions worth 4 points each
Answer the main 8 questions first and then the two extra credit questions
Each part of a question carries equal weight
80 points will be 100% for Exam #1; Total possible points 88
Please number the questions as given below in your answers
Date given: July 1, 2024
Date Due: July 16, 2024

<u>Main Questions (10 points each)</u>

1.   (a) Describe XACML and SAML (Lecture 2-1) (b) Describe Security for Web Services (Lecture 2-2)

2.   (a) Describe Security for Cloud Computing (Lecture 2-3) (b) Describe Aspects of Cloud Governance (Lecture 2-15)

3.   (a) Describe how ABAC may be implemented in an organization (Lecture 2-4), (b) Describe an approach for Cloud-based Assured Information Sharing (Lecture 2-5)

4.   Describe an approach for Cloud-based Malware Detection (Lecture 2-10)

5.   Describe an Access Control Model for Big Data and the Cloud (Lecture 2-7)

6.   Describe Security for Hadoop (Lecture 2-8)

7.   Describe Security for MapReduce (Lecture 2-9)

8.   (a) Describe Backup and Recovery for the Cloud (Lecture 2-11), (b) Describe Mobile Cloud and the associated security issues (Lecture 2-12)

<u>Extra Credit (4 points each)</u>

9.   (a) Describe two attacks to the Cloud (Lecture 2-14), (b) Describe aspects of Cloud Monitoring (Lecture 2-13)

10. (a) Describe security for a cloud product (e.g., AWS) (Lecture 2-16), (b) Describe Virtualization aspects of the Cloud (Lecture 2-6)