

# Practice Session-1

## *TCS332 Fundamental of information security and blockchain*

**Classes coverage:** 19, 25, 26 Sept. 2023

**Last date of submission:** 26 Sept. 2023, 4.00 PM

**Submission type:** Hand-written sheets

**Maximum Marks:** 100

### **Instructions:**

- \* All questions are compulsory to attend.
- \* The students must provide the answers in the form of the hand-written sheets.
- \* Any cheating or copying of answers will result in zero marks.
- \* Each question carries ten marks.

Q1: Explain the guidelines of the zero trust model. Where can we apply this model?

Q2: What is penetration testing? What are the different steps of penetration testing?

Q3: Differentiate among the following categories of hackers:

Black hat hackers, white hat hackers, grey hat hackers.

Q4: Explain the following approaches to effective cyber security:

Confidentiality, integrity, and availability.

Q5: Write down a shell script to copy a file from one location to the other location.

Q6: Write down a shell script to compute the factorial of a given number.

Q7: Write down a Python program to compute the table of a given number. Use for loop in your program. Also, calculate the computational time of the program.

Q8: Explain the uses of the following Linux commands using their syntax:

cat, touch, echo, grep, mkdir, rmdir, cp, mv, man, chmod, ifconfig, ping, pwd, and ls.

Q9: Write down a Python program to store the usernames and hashed passwords in the created file. Take the value of usernames and passwords from the user as the input. Use the concept of file handling in your program. Do this exercise for two users?

Q10: Describe the following pillars of the cyber security:

People, processes, and technology.