**MULTIMEDIA UNIVERSITY OF KENYA**

**FACULTY OF COMPUTING AND INFORMATION TECHNOLOGY**

**BSc. Computer Science & BSc. Software Engineering**

**CCS 2411 Computer & Network Security**

**Assignment 1 Due: 25th February 2022**

a) Describe the three main concerns with the use of passwords for authentication.

Explain what is meant by a social engineering attack on a password. (4 marks)

b) Explain how attacks on passwords are broadly classified. (4 marks)

c) Explain how access control lists are used to represent access control matrices.

Describe the environments in which they are widely used and their advantages

and disadvantages. (6 marks)

d) Suppose the following groups are defined to shorten a system’s access control

lists:

– Group1: Alice, Bob, Cynthia, David, Eve

– Group2: Alice, Bob, Cynthia

– Group3: Bob, Cynthia

Suppose the access control list for File 1 is:

– File 1: Group 1, R; Group 2, RW

If Alice wants to write to File 1 giving your reasoning state whether Alice will

be allowed to do so if:

i) The first relevant entry policy is applied

ii) The any permission in list policy is applied

Suppose the access control list for File 2 is:

– File 2: Group 3, RWE

iii) Show how the need for a Group 3 for File 2 can be removed using

access none. (6 marks)