1. Network Security

**a. Consider the security of the above system, discuss three potential security issues and provide countermeasures. For each of the issues, specify the related security service(s), attack(s) and mechanism(s). The demonstrated issues must not relate to the same security service(s). (3 marks) b. Consider that a bank**

1. Security issue 1
2. Security issue 2
3. Security issue 3

**b. Consider that a bank employee requests to modify a bank customer’s daily cash transfer limit. Briefly describe the essential security-related step(s) that demonstrate the security checks for the operation. For each step, specify the aimed security service(s). (3 marks)**

Description of each step

**c. An employee accesses the internal system with proper authentication and authorisation. Consider Kerberos, SAML, and OAuth, which one is better for internal system authentication and authorisation? Justify your answer. (2 marks)**

which authentication and authorisation is better for this system

**d. To provide secure connection services for the travelling employees, which of IPSec, SSL/TLS, and SSH, would be a better option? Justify your answer. (2 marks)**

which would be a better option. justify

1. Programming Task