1. Name 3 design principles and state what they mean. (3)

*Answer:*
   a. Complete mediation: Check every access to an object to ensure that access is allowed.
   b. Least privilege: A subject should be given only those privileges necessary to complete its task
   c. Economy of mechanism: Keep the design and implementation as simple as possible

2. Differentiate between IPSec *transport* and *tunnel* modes (2)

*Answer:*
   In *transport mode*, only IP packet data area is encapsulated. The IP Header is not protected. However, in *tunnel mode*, the entire IP packet is encapsulated in an IPSec envelope

3. State what you understand by the following (3)

*Answer:*
   *Firewall*: It is a configuration of machines and software that limits network access
   
   *Virtual Private Network*: It is a private network that is configured within a public network

4. Illustrate the stages of a waterfall model. (2)

*Answer:*

- Requirements definition and analysis
- System and software design
- Implementation and unit testing
- Integration and system testing
- Operation and maintenance