

Q. 1

- a) An operating system is a software system that manages hardware and provides an interface for users to interact with the computer.
- b) A process is a program that is currently being run by the computer, and a thread is a lightweight version of a process that executes a portion of the process's code.
- c) An operating system does:
- Processes: Manages the activities of multiple processes.
 - Memory: Ensures all programs and processes have enough memory.
 - Devices: Controls input devices like printers.
 - Security: protects data and programs from hackers.

d) The kernel is an essential part of the OS that manages memory, the CPU, and other resources acting as an intermediary between software and hardware.