Q.1

client/server

Pro

Centralized data repo. Easier to maintain, more accountability,

better security.

Can control and record transactions by clients.

One server can work with wider variety of client capabilities.

Well-known port numbers.

Con

Centralized & less robust. Efficiency & reliability depond on server.

popular data = more congestion, slower.

peer to peer

Pro

Decentrilized & more robust. No single point of failure.

Popular data = more distribution, faster.

Con

Decentralized data. More redundancy, harder to maintain,

less accountability, less stability.

Transactions are not recorded, harder to trace.

Peers need to be farily compatible.

Peers need to find each other, no well-known ports.

Q.2

Host A is the authorative host. Host B connects to host A. Host C connects to host A too. Host A knows the data (ip address, port numbers) of the hosts that are connected to host A (host B & host C). Host A gives the data of host B to host C and vice versa so that the two hosts can connect using eachother.

Q.3

UDP hole-punching is a technique that allows a packet to be sent from an outside system by punching a hole in the firewall of the network.