# T10: Application Layer II

**Q1:** In DHCP, why is the client required to renew the lease on IP address in use?

**Q2:** Can a machine with a single DNS name have multiple IP address? How could this occur?

**Q3:** What is the use of "hosts" file? What are the advantages of having a DNS server over "host" file?

**Q4:** Consider the following case study.

Alice in Curitn University (alice@cs.curtin.edu.au) wants to send an email to Bob in Yale university (bob@cs.ai.yale.edu). Write down all the steps involved in the process of sending an email including the name resolution process via the DNS Servers.

*You may assume that the DNS servers exist for curtin, edu (TLD), Yale and Yale Computing Faculty (cs)*

**Q5:** Why is Napster not considered a pure p2p protocol? Why is Gnutella considered to be a pure p2p protocol?

**Q6:** Explain the process of joining a torrent in BitTorrent protocol. What does the term **tit-for-tat** mean in BitTorrent protocol?

**Q7:** In P2P web, explain how the users visiting a website can contribute to the bandwidth.