

Ex3:

Q1: IP address of [www.cecs.anu.edu.au](http://www.cecs.anu.edu.au) is 150.203.161.98 .

Recursive DNS query is sent since we have 'ra' and 'rd' in the 'flags' section.

Q2: Canonical name for the CECS ANU web server is 'rproxy.cecs.anu.edu.au' and its IP address is 150.203.161.98 . The reason of using alias is it can use more than one name to point to a single host, making it easy to do such things as host both a File Transfer Protocol (FTP) server and a Web server on the same computer.

Q3: In the Authority section it states that the host have 3 different DNS server names:ns4,ns2,ns3. In Additional Section it states 3 A source records which is IPv4 answer or entry for the said domain.3 AAAA source records which is IPv6 answer or entry for domain.

Q4: IP address of the local nameserver of my machine is 129.94.208.3

Q5: DNS nameservers for the 'cecs.anu.edu.au' domain are: ns4.cecs.anu.edu.au , ns2.cecs.anu.edu.au and ns3.cecs.anu.edu.au. Corresponding IP address are ns4:150.203.161.38 , ns2: 150.203.161.36 , ns3: 150.203.161.50 . Iterative DNS query is sent to obtain this information.

Q6: DNS name is [www.engineering.unsw.edu.au](http://www.engineering.unsw.edu.au). Recursive DNS query is sent.

Q7: No,I did not get any authoritative answer. Because QR in flags field indicates that this message is a response.

Q8: The message has a warning 'recursion requested but not available' also it only has Question section and 0 answer,authority and additional.

Q9: Iterative query is sent to obtain this information.

Q10:NS: beethoven.orchestra.cse.unsw.edu.au (129.94.242.33)

Authoritative name server for the 'au' is 'a.au. dns.audns.net.au. 2019030248 86400 900 1209600 43200' (58.65.254.73)

Authoritative name server for the 'edu.au' is 65.22.196.1

Authoritative name server for the 'unsw.edu.au' is 129.94.0.192

Authoritative name server for the 'cse.unsw.edu.au' is 129.94.172.11

Authoritative name server for the 'bongo16.cse.unsw.edu.au' is 129.94.208.151  
5 DNS servers to query to get the authoritative answer.

Q11: Yes,just use alias for it.