Network Architectures 3329 02
Fall 2018 **Quiz 2-3**
09/18/18

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1. DNS is a core network function that is implemented at application layer via the client-server paradigm.

   A. True B. False

2. A centralized design of DNS will not scale, because

   A. The server becomes a single point of failure

   B. Significant delay (during communication) to distant querying clients

   C. The server will need to handle a high volumn of traffic

   D. all of the above

3. Which type of DNS server does *not* belong to the DNS server hierarchy

   A. root

   B. local

   C. authorative

   D. top level

4. DNS database stores resource records — four-tuples that contain the fields `(Name, Value, Type, TTL)`. Which of these fields appear in a DNS query message?

   A. `(Name, Type)`

   B. `(Name, TTL)`

   C. `(Type, TTL)`

   D. `(Name, Value)`

5. Consider file distribution in a network of 1 server and N peers: the server owns a file, the task is to get every peer a copy. Supose the upload rate of the server is u_s, the download and upload rate of ith peer is d_i (The minimum download rate is d_{min}) and u_i. The size of the file is F. In a P2P architecture, the time it takes to upload the file is at least:

   A. $\mathbf{F/u_s}$

   B. $\mathbf{NF/u_s + u_i + \cdots + u_N}$

   C. $\mathbf{max\{F/u_s, NF/(u_s + u_i + \cdots + u_N)\}}$

   D. $\mathbf{max\{F/u_s, NF/(u_s + u_i + \cdots + u_N), F/d_{min}\}}$