ELEX 4550 : Wide Area Networks
2015 Winter Session

Solutions to Assignment 4

Question 1

A BIND-format DNS record (one line) that says that mail for the domain bcit.ca should be sent to outlook.live.net with a priority 10:

```
bcit.ca. IN MX 10 outlook.live.net.
```

Note that the examples in the lecture notes are missing the name class field (`IN` for Internet).

Question 2

This record would be stored on an authoritative DNS server. This record, like all other DNS records, are retrieved by recursive name servers from authoritative name servers.

Question 3

The TTL is part of the DNS RR and specifies how long the record should be considered valid from the time it was retrieved from the authoritative server. Therefore the RR would be valid until 3 PM regardless of which type of DNS server it was retrieved from.

Question 4

For:

`ftp://anonymous:anonymous@example.org/old/archive.tar.gz`

If this is parsed as a URI:

- *scheme*: `ftp`
- *hier-part*: `//anonymous:anonymous@example.org/old/archive.tar.gz`.

If this is parsed as a URL:

- *scheme*: `ftp`
- *domain*: `anonymous:anonymous@example.org`
- *path*: `old/archive.tar.gz`.

`anonymous:anonymous@` is an optional identification part of the hierarchy part.

Question 5

According to the Wikipedia article "Internet media type", the MIME types have the following meanings:

1. video/ogg - Ogg Theora or other video (with audio); Defined in RFC 5334
2. multipart/mixed: MIME Email; Defined in RFC 2045 and RFC 2046
3. application/octet-stream: Arbitrary binary data.

Question 6

An example of the HTML code would be:

```
Student Name <b>A00123456</b>
<a href="http://en.wikipedia.org/wiki/Kraft_dinner">
Kraft Dinner</a>.
```

which renders in a browser as: