Topic 2: ApplicationLayer

Questionnaire 3: Electronic Mail in the Internet

Q1. The principal application-layer protocol for Internet electronic mail is the Simple Mail Transfer Protocol (SMTP), which:

A. does not require an application-layer handshaking phase.

B. uses non-persistent connections.

C. names the hostname of the server with the `HELO` command.

D. uses `CRLF.CRLF` as a command issued by an SMTP client.

Q2. SMTP is primarily a *push protocol*, which means that:

A. SMTP transfers e-mail messages from one mail server to another mail server.

B. the receiving mail server pushes the e-mail message to the sending mail server.

C. the sending mail server pushes the e-mail message to the receiving mail server.

D. both the client and server sides of SMTP run on every mail server.

Q3. Multipurpose Internet Mail Extensions (MIME) is an Internet protocol that:

A. was created as an alternative to SMTP.

B. is used because SMTP restricts the headers and body of mail to 7-bit ASCII, and therefore requiring non-ASCII data to be 7-bit ASCII encoded before transfer.

C. defines five additional e-mail header fields, including `Content-Transfer-Encoding`, which describes the content type of the document to be encoded before transfer.

D. Does not support multiple items in one message.

Q4. *Post Office Protocol – Version 3* (POP3):

A. is a protocol that transfers e-mail messages from sender's user agent to the sender's mail server.

B. assigns e-mail messages to folders using *download-and-keep* mode.

C. specifies only four commands during the transaction phase, in which all are used in the *download-and-delete* mode.

D. Maintains user state information between POP3 sessions.

Q5. Internet Mail Access Protocol (IMAP):

A. is a mail access protocol, which differs from HTTP.

B. provides commands to retrieve a part of a multipart MIME message.

C. provides commands to assign, as with POP3, e-mail messages to folders.

D. demands minimal use of server resources.