

## **Part A**

### **Scenario 1**

#### **Question 1**

1460 milliseconds

#### **Question 2**

1980 milliseconds

### **Scenario 2**

[Excel Sheet](#)

#### **Question 1**

252.5634143

#### **Question 2**

505.1268286

#### **Question 3**

741.6902429

#### **Question 4**

#### **Question 5**

#### **Question 6**

#### **Question 7**

#### **Question 8**

## Part B

**Question 1:** What is the web browser being used by the sender?

Firefox

**Question 2:** What is the web server software being used in the remote server?

Server: Microsoft-ISS 7.0

**Question 3:** Is protocol offloading being used at the client?

No it is not

**Question 4:** How many routers are there between the client and server?

2

**Question 5:** What is the raw TCP sequence number of

a) the packet initiating the TCP connection?

Sequence Number (raw): 3851697578

b) the acknowledgement from the server for the above packet?

Sequence Number (raw): 2747564191

**Question 6:** In frame 4, what are the values of the 8 TCP flags (CWR to FIN) as a single 8-digit binary number?

00011000

**Question 7:** In frame 4, the GET request is for a javascript file resource. What is the address of the web page that requested this javascript file resource?

http://a.bcd.com

**Question 8:** How long should the received javascript file be considered fresh?

110 milliseconds

**Question 9:** What is the initial value of the window scale shift count indicated by

a) the client?

7

b) the server?

5

**Question 10:** The GET packet from the client to the server has an advertised window size of 46. What is the true value window size in bytes?

753664 Bytes

**Question 11:** How many bytes are lost totally while tranmissing is indicated in the pcapfile?

answer

**Question 12:** How many duplicate acknowledgments are sent by the client regarding the missing bytes?

answer

**Question 13:** In which frame is the lost frame retransmitted?

answer

**Question 14:** In which frame does the receiver indicate that all missing frames have been received?

answer

**Question 15:** From frame 1 to 3(inclusive), how many frames have incorrect checksum value?

answer