SIIT ITS323

## ITS323 - Quiz 7

Name:		
ID:	Mark:	(out of 10

## **Question 1** [4 marks]

Consider two hosts with the following properties:

- Client
  - IP: 64.32.16.1 Application port: 12456 Initial Sequence Number (ISN): 96
- Server
  - IP: 22.33.44.1 Application port: 205 Initial Sequence Number (ISN): 123

The 1<sup>st</sup> column in the table below gives the names of selected fields in a TCP segment. The 2<sup>nd</sup> column gives the length of the field (in bits). Answer the following questions by writing the field values in the table. If the field value is not relevant, then write a cross 'X' in the table.

Consider TCP connection establishment. What are the field values for:

a) 2<sup>nd</sup> TCP segment sent in the connection establishment

Assume the connection establishment was successful. What are the field values for:

b) 1<sup>st</sup> TCP segment sent by server that contains data (the data is 3000B)

Field	Size (bits)	(a)	(b)
Source port	16		
Dest. port	16		
Sequence number	32		
Ack. number	32		
SYN flag	1		
ACK flag	1		

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## **Question 2** [6 marks]

Assume classless addressing is used. Computer A has IP address 36.36.36.36/12.

a) What is the address of the network for computer A?

b) What is the directed broadcast address for the network?

c) How many IP devices can be attached to the network?

d) If Computer B with IP address 36.30.30.36/12 sends an IP datagram to destination 255.255.255, will Computer A receive the datagram? Explain you answer.