

## ITS413 – Quiz 4

Name: \_\_\_\_\_

ID: \_\_\_\_\_ Mark: \_\_\_\_\_ (out of 10)

### Question 1 [8 marks]

True or false (circle the most accurate answer for the statement):

- a) In the Internet, congestion mainly occurs at TCP destination hosts. TRUE      FALSE
- b) If an ACK is not received when expected, a TCP source assumes congestion is increasing in the network.      TRUE      FALSE
- c) TCP is a connection-oriented protocol.      TRUE      FALSE
- d) Flow control involves limiting the sending rate of a TCP source so that the receiving host is not overflowed.      TRUE      FALSE
- e) The number of outstanding bytes a TCP source may have is limited only by the Congestion Window.      TRUE      FALSE
- f) If the buffer size of a router is infinite, then packet delay at the router will tend to infinity if the total incoming data rate of its links is larger than the total outgoing data rate of its links.      TRUE      FALSE
- g) TCP uses network-assisted congestion control.      TRUE      FALSE
- h) For congestion control, TCP assumes the source sending rate is inversely proportional to the RTT.      TRUE      FALSE

### Question 2 [2 marks]

For the descriptions in parts (a) to (d) , select one from the 6 mechanisms/parameters that is most closely related. [½ mark for each]

Additive Increase  
Slow Start Phase

Multiplicative Decrease  
Maximum Segment Size

Congestion Window  
Advertised Window

- a) Slow increase in sending rate \_\_\_\_\_
- b) Fast increase in sending rate \_\_\_\_\_
- c) Response when congestion is detected \_\_\_\_\_
- d) Limits the sending rate to avoid congestion \_\_\_\_\_