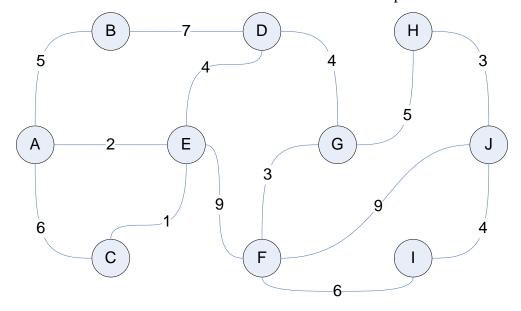
SIIT ITS 413

ITS 413 – QUIZ 1	
First na	ame: Last name:
ID:	Total Marks: out of 10
Ouesti	on 1 [2 marks]
a)	are a type of address used to identify an application on a computer.
b)	involves managing the rate at which hosts send, so that packets are not dropped (or buffered too long) at routers.
Questi	on 2 [2 marks]
select	thod of implementing IPTV (television over the Internet) is to have viewers (people) to a channel, and the TV stream for that channel is sent only to those viewers. What sing/delivery mechanism should be used for this method of IPTV? Explain your answer.
Questi	on 3 [2 marks]
It takes for add control	evelop a new application layer protocol that implements a very simple "SMS" application is data from the user (e.g. a short message up to 160 bytes in length), adds a 20 byte header dressing and control purposes, and sends the resulting message to the receiver. No other messages are used. Your protocol uses TCP, which in your current network provides reliability and a transfer rate of 900kb/s.
a)	What is the maximum throughput of your new protocol in the network?
b)	If you added Stop-and-wait error control to your new application protocol, where each acknowledgement message was 20 bytes in length, what is the maximum throughput (ignore any propagation and processing delays)?

SIIT ITS 413

Question 4 [4 marks]

Consider the network below. For each link a cost is shown. Assume the links are bi-directional, and the costs are identical in both directions. Node A wants to send a packet to node J.



a) What is the total cost of transmission if flooding is used? Assume the TTL is initially 3, and a node will only forward the same packet one time.

b) Explain an advantage and disadvantage of using a shorter TTL of 2.

- c) If instead of flooding, a least-cost routing algorithm was used in the above network, what would be the cost of forwarding the packet?
- d) In comparison to flooding, what *other* transmission cost must be incurred in least-cost routing in addition to that in part (c)?