ITS 323 – QUIZ 5 (IT) ANSWERS

First name: _____ Last name: _____

ID: _____ Total Marks: _____
out of 10

Question 1 [9 marks (1.5 each)]

True or False:

a) The aim of Medium Access Control (MAC) in LANs is to ensure frames (or transmissions) do not collide with each other. T / F

b) The IEEE 802 series of LAN standards focus on the Physical Layer and Data Link Layer of the OSI model. T / F

c) Centralised control for Medium Access Control (MAC) has the advantage (compared to distributed control) that if the controlling station fails, the network can still operate. T / F

d) The following hexadecimal address is an example of an Ethernet (or Hardware) address: 00:17:31:E5:22:89 T / F

e) In the Internet Protocol, virtual circuit packet switching is used. T / F

f) IP includes an ARQ (Automatic Repeat reQuest) retransmission scheme to perform error control. T / F

Answers

True – The normal assumption of a MAC is that a computer cannot successfully receive two frames at the same time (i.e. collision), hence the aim of the MAC is to ensure this doesn't happen (by ensuring only one station transmits at a time).

True

False – If the controlling station in a centralised scheme fails, nothing can be sent – this is a disadvantage of Centralised control.

True – 12 hexadecimal digits is equivalent to 48-bits, which is a possible IEEE 48-bit address.

False – IP uses datagram packet switching – no connection is setup.

False - IP doesn't perform any retransmission or error control.

Question 2 [1 mark]

Which *two* of the following mechanisms are mechanisms for performing dynamic (that is, asynchronous) Medium Access Control (circle only two answers):

a) Switching-based MAC

b) Round-robin-based MAC

c) Flooding-based MAC

d) Contention-based MAC

e) Ring-based MAC

f) Bus-based MAC

Answer

Round-robin-based MAC and Contention-based MAC