

Indian Institute of Technology Bombay

Department of Electrical Engineering

Handout 22

Quiz 9 : 10 points

EE 706 Communication Networks

March 25, 2010

1. Classify the following MAC addresses which have been written in hexadecimal notation as unicast, broadcast and multicast addresses.

[5 points]

- AA BB CC AA BB CC
- 11 11 11 11 11 11
- FF FF FF FF FF FF
- 44 44 44 44 44 44
- EE EE EE EE EE EE

2. A hypothetical CSMA/CD system has three copper twisted-pair segments connected together by two repeaters. Each segment is 200 metres long. The one-way processing delay at a repeater is one microsecond. We wish to operate this system at 10 megabits per second. If the speed of the signal in copper is 2×10^8 metres per second, what is the minimum size of the frame in such a system which will ensure that a collision never goes undetected?

[5 points]