CS5248 Systems Support for Continuous Media
Quiz 1

Answer ALL questions in the space provided. Please state your assumptions (if any) clearly.

1. An MPEG-1 video consists of I-frames, P-frames and B-frames. Macroblocks in P-frames are coded with reference to the preceeding I- or P-frames; while macroblocks in B-frames are coded with reference to the preceeding I- or P-frames, and the succeeding I- or P-frames.

   Among I-, P- and B-frames, I-frames are the *m*ost important, since other P- and B- frames depend on I-frames. B-frames are the *l*east important, since no other frames depends on B-frames.

   Understanding the "importance" of a frame can help an application decides whether to retransmit a loss packet. For instance, if the application only have time to retransmit one packet, it should retransmit a packet containing I-frame rather than B-frame.

   (a) Are all P-frames equally important? Why or why not?

   (b) Are all I-frames equally important? Why or why not?

END OF PAPER