

## QE for CS546 Wireless Mobile Internet (each 20 points)

1. Propose a way to detect hidden terminal problem in WiFi network?  
Is it possible to detect it completely? Why or why not?
2. Does OSPF use flooding in the protocol? What is the purpose? And what is the way to reduce route control overhead?
3.  $WCETT = (1 - \alpha) * \sum_{i=1}^L ETT_i + \alpha * \max_{1 \leq j \leq k} T_j$  where  $ETT_i$  is the expected transmission time of link  $i$  in a path of length  $L$  and  $T_j$  is the sum of the transmission times on a particular channel  $j$ .

Describe the purpose of WCETT and is it possible to avoid the hidden terminal problem in a flow using WCETT?

4. What is a way to reduce the handoff delay in WiFi?
5. Why the VoIP capacity per Access Point is around 10 % of its max data rate?