Hadassah Academic College
Department of Computer Science

Protocols and Computer Networks Exercise 5

1. Explain briefly the significance of multipath fading for a WiFi user operating between walls that strongly reflect radio signals.
2. Explain briefly the advantage of MACA over CSMA/CA.
3. Explain briefly why WiFi defines four address fields in the MAC header.
4. A 3G user moves from a cell in cluster A to a cell in cluster B. Explain briefly why the user remains connected to both clusters for some time.
5. A CDMA system broadcasts using the following codes:

$$S_1 = \begin{bmatrix} -1 \\ -1 \\ -1 \\ -1 \end{bmatrix} \quad S_2 = \begin{bmatrix} -1 \\ +1 \\ +1 \\ -1 \end{bmatrix} \quad S_3 = \begin{bmatrix} -1 \\ -1 \\ +1 \\ +1 \end{bmatrix} \quad S_4 = \begin{bmatrix} -1 \\ +1 \\ -1 \\ +1 \end{bmatrix}$$

Decode the following transmission for the four users:

0	4	0	0	-4	0	0	0	0	0	0	-4	2	-2	2	2