

MobSys & WSN Exam 27-01-2020 No. B

(for persons having other vocals except A as first vocal in their family name)

S1) Compare the multiple access modes TDMA and FDMA using your words, enhancing the advantages and disadvantages of one vs the second one and highlight the challenges you expect to be solved during their implementation.

S2) a) Explain what is Quality of Service (QoS) and why is it so important for data services.

b) How is ensured the security over a mobile link during a GSM call?

S3) a) Propagation over plane horizontal surfaces. Demonstrate the losses formula. What is the attenuation (in dB), if the receiver, having an antenna with 2 dBi gain and placed at v m height from the earth surface, is placed at a distance of n km from a transmitter, having an antenna with 5 dBi gain and placed at c m height from the earth surface? (n is the length, in characters, of your family name and v , respectively c are the no. of vocals and consonants in your first given name)

b) Define using your words what means the following terms: i) cell; ii) cluster; iii) handover

Working time: 90 min.

After you finished the work, please scan the written pages (or take photos of them with your phone camera), concatenate the resulting pages into a pdf file and upload it on Moodle.

Please include in this document the photo of one of your official identity document (ID card, passport or driving license). You may cover other info except your names, your photo and also the date of validity. It will be used only to prove that the written document is yours, not for other purposes.

A, E, I, O, U are considered vocals. Any other letters are considered consonants.