COMPUTER SCIENCE TRIPOS Part II – 2013 – Paper 9

10 Principles of Communications (JAC)

The modern smart phone features voice (and video) and data communication. However, in the first three generations of technology (from the initial cellular systems up until 3G phones), the network for voice has been separate from the one for data. The GSM circuit-switched part uses a customized protocol stack for carrying the time critical speech traffic.

The next generation of networks (*"4G"*) are intended to be integrated around the Internet Protocol. What are the technical enhancements required to a best-effort Internet Service, to support the different types of flows while meeting the users' needs? [20 marks]