2054

M.E. (Computer Science and Engineering)
Second Semester
Elective – IV
CS-8210: Telecommunication Technologies

Time allowed: 3 Hours   Max. Marks: 50

NOTE: *Attempt <u>five</u> questions in all, including Question No. I which is compulsory and selecting two questions from each Section.*

x-x-x

Question 1 is compulsory. Attempt at least two questions each from Section-B and C.

Q1 a) What is difference between WCDMA and TDCDMA?

b) How does RTCP support multimedia synchronization?

c) What are the main features of YATE?

d) What software tools are commonly used for traffic modeling?

e) What are SSH keys and how are they used?

10

SECTION -A

Q2   What is a 3G network? What are the key technologies used in 3G networks? Draw and explain the main components of a 3G network architecture   10

Q3.   What are the components of IMS architecture? How does IMS support session control and signaling? What protocols are commonly used in IMS?   10

Q4.   a) What are the main features of Debian OS?   4

b) What is RTP and SIP Switching and how does it they both relate?   6

SECTION-B

Q5.   a) Why is QoS important in networks? What are the key QoS metrics? How does queue management contribute to QoS?   5

b) Why is the multidimensional Erlang formula important? How do you calculate the blocking probability using the multidimensional Erlang formula?   5

Q6.   a) What are the main threats to data in IP networks? How does SSL protect data?   5

b) What factors affect capacity dimension in wireless networks?   5

Q7.   Explain the significance of the following RFCs:

a) RFC 3261

b) RFC 3711

10

x-x-x