USN | | | | | | | | | | 14SCN24

Second Semester M.Tech. Degree Examination, June/July 2015
Switching and statistical Multiplexing in Telecommunications

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions.*

1   a. Explain the basics of a switching system with neat diagram.   (10 Marks)
    b. Explain the simple telecommunication system with neat diagram.   (10 Marks)

2   a. Explain the advantages of digital voice network.   (12 Marks)
    b. Explain the principle of cross bar switching with neat diagram.   (08 Marks)

3   a. Explain the cross paint technology with neat diagram.   (08 Marks)
    b. Explain the design considerations of touch tone dail signaling with neat diagram. (12 Marks)

4   a. Explain the two stage network in electronic space division switching with neat diagram.
                                                                                (10 Marks)
    b. Explain the Time Division multiplexing TDM in digital transmission system. (10 Marks)

5   a. Explain the distributed stored programme control in electronic space division switching
       system.   (08 Marks)
    b. Explain the enhanced services due to stored programme control.   (07 Marks)
    c. Explain the sampling in digitizing speech.   (05 Marks)

6   a. Explain the two stage time space(TS) switch and two stage space time (ST) with neat
       diagram.   (10 Marks)
    b. Explain the time slat interchange (TSI) with neat diagram.   (10 Marks)

7   a. Explain the time division space switching with neat diagram.   (10 Marks)
    b. Explain the grade of service (GOS) and blacking probability.   (06 Marks)
    c. In a group of 10 servers, each is occupied for 30 minute in a observation interval of two
       hours, calculate the traffic carried by the group.   (04 Marks)

8   a. Derive an expression for Erlang loss formula.   (10 Marks)
    b. Derive an expression for Erlang delay formula in delay system.   (10 Marks)

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