

B.E. / B.Tech (FullTime) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2011  
INFORMATION TECHNOLOGY  
FOURTH SEMESTER

**EC 296 – TELECOMMUNICATION SWITCHING AND NETWORKS**

(REGULATION 2004)

Time: 3 Hours

Max.marks: 100

Answer ALL Questions

Part-A (10x2=20 Marks)

1. Give the application of echo-request message.
2. Draw the pictorial representation for the relationship between modems and communication link.
3. Define switches.
4. List out advantages of switching system software.
5. Distinguish between channel associated signaling and common channel signaling.
6. What do you mean by Grade of Service?
7. List the problems with integrated services.
8. What are the types of multiplexing techniques?
9. List the protocols defined by TCP/IP at the transport layer.
10. Why are standards essential in telecommunication networking?

Part-B (5x16= 80 Marks)

- 11.(i) With neat diagram explain the simplest type of switching fabric. (8)
  - (ii) Describe the components of PCM encoder. (8)
  - 12.(a) With suitable diagrams explain the features of circuit-switched networks. (16)
  - OR**
  - 12.(b) Define virtual-circuit network and explain its characteristics with necessary illustrations. (16)
  - 13.(a)(i) Compare in-band signaling and out-of-band signaling. (10)
  - (ii) List the tasks required to be performed by a signaling system. (6)
  - OR**
  - 13.(b) Give a brief description about signaling network and discuss on the layers in SS7. (16)
  - 14.(a) Explain the main parameters of integrated services with neat diagrams. (16)
  - OR**
  - 14.(b) Discuss the following:
    - (i) IDN environment (8)
    - (ii) SONET / SDH (8)
  - 15.(a) Compare the features of FDMA, TDMA and CDMA. (16)
  - OR**
  - 15.(b)(i) Draw the block diagram of ISO-OSI architecture and explain. (8)
  - (ii) Write the principle of ATM networks. (8)
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