

B.E / B.TECH (FULL TIME) DEGREE END SEMESTER EXAMINATION, APRIL 2011

Information Technology

Fourth Semester

Regulation 2004

**EC296 TELECOMMUNICATION SWITCHING AND NETWORKS**

Time: 3 hours

Max. Marks : 100

Answer all the questions

**PART – A (10 \* 2 = 20 MARKS)**

1. Find the total number of point to point links if there are 7 entities and state the advantages of switching system.
2. In what way is stored program control superior to hard-wired control?
3. State the difference between circuit switching and S/F switching.
4. List the various software recommended by CC ITT.
5. In a national transmission system the characteristic impedance of 4 wire and 2 wire circuits are  $1000\Omega$  and  $1200\Omega$ . If the largest distance of connection is 300Km. Determine the attenuation.
6. Define GOS.
7. State the topologies used in telecommunication and give the hierarchical structure recommended by CCI TT.
8. How does an echo suppressor work?
9. Differentiate datagram and virtual circuit.
10. What is LOS?

**PART – B (5 \* 16 = 80 MARKS)**

- 11.i. With a neat block diagram explain SPC exchange. (8)
- ii. Describe about (i) modems (ii) Hybrid (4+4)

12a. Describe time division time switching and explain the various modes of operation.  
(Or)

b. Explain the software architecture for call processing and discuss about SDL.

13a. Differentiate in channel signaling and common channel signaling. Explain SS7 protocol.

(Or)

b. Derive the blocking probability for LCC.

14a. Explain Time division multiplexing and state the advantages and disadvantages over FDM.

(Or)

b.i. Discuss about PCM coders. (8)

ii. Explain the various multiple access techniques. (8)

15a. Explain about ISO-OSI architecture.

(Or)

b. Describe the principles of ATM networks.

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