Reg. No. : ....

Name : ....

VIII Semester B.Tech. Degree (Reg./Sup. – Including Part Time) Examination, April 2013
(2007 Admn. Onwards)
PT2K6/2K6 EC 805 (C) : COMMUNICATION SWITCHING SYSTEMS

Time: 3 Hours   Max. Marks: 100

PART – A

Answer **all** questions. **Each** carries **5** marks.

1. Explain about the following parts of a circuit switched network.
   Local office
   Tandem
   PBX
   Trunks.

2. Describe the merits of electronic switching systems. Sketch a 5 × 5 square array digital switch.

3. Sketch the switching network of No. 5 ESS switch of AT and T.

4. Derive the Lee's equation of a three stage switch.

5. Define the following terms :
   i) Traffic intensity
   ii) BHCA and BHCR
   iii) CCR.

6. What is indicated by M/M/1 representation of a queueing system. How it is different from M/G/1 queueing system.

7. Name and explain the different types of basic signals required between exchanges to establish a simple telephone call.

8. What is LAP-D ? Explain.   (8×5=40)

PART – B

Answer **all** questions. **Each** carries **15** marks.

9. A) Distinguish between centralised SPC and distributed SPC. Explain different levels of processing in distributed SPC.

   OR

   B) With block diagram explain a time multiplexed space switch.

10. A) Describe with structure, a 5-Stage T-S-S-S-T switch. Analyse the blocking probability using Lee's approximation.

    OR

    B) With block diagram explain the structure and operation of AT and T No. 5 ESS. Explain call connection procedure.

11. A) Derive the Erlang-B formula for an LCC system with infinite sources.

    OR

    B) Derive the Grade of service and blocking probability PB equation of a lost calls cleared system with finite subscribers.

12. A) With block diagram of No. 7 CCITT signalling system, explain each levels in its structure. Compare it with OSI seven layered model.

    OR

    B) Write technical notes on the following :   **(4×15=60)**
       i) Bense network
       ii) ATM routers.