

Code No: D6104, D6504

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.TECH II - SEMESTER EXAMINATIONS, APRIL/MAY 2012
TELECOMMUNICATION SWITCHING SYSTEMS AND NETWORKS
(COMMON TO COMMUNICATION SYSTEMS, WIRELESS & MOBILE COMMUNICATIONS)
Time: 3hours **Max. Marks: 60**

Answer any five questions
All questions carry equal marks

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1. a) Explain the principle of operation of switching system.
b) What is the drawback of point to point telephone network? How is it eliminated?
2. a) Derive the expression for the availability of a single processor system and dual processor system.
b) Distinguish between Micro program control and hard wired control.
3. a) Draw the structure and explain the operation of memory controlled time division space switch.
b) Explain the principle of operation of Time Slot Interchange Unit.
4. a) Explain the operation of Two-Wire to Four wire transformer.
b) Explain the operation of NOSFER transmit and receive equivalent systems.
5. a) Draw block schematic and explain the operation of voice frequency receiver.
b) What is Multiframeing? Explain its use in PCM system.
6. Explain and compare Bus and Ring Networks with its merits and demerits.
7. a) Derive the expressions for Erlang delay formula and queue capacity Q.
b) What are the services of NISDN and BISDN? Explain.
8. Write a brief note on
 - i) Application of graph theory to link systems
 - ii) Rearrangeable Networks.
