



Name :

Roll No. :

Invigilator's Signature :

CS/B.TECH (ECE) (Separate Supple)/SEM-7/EC-704F/2011

2011

**TELECOMMUNICATION NETWORK
MANAGEMENT**

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

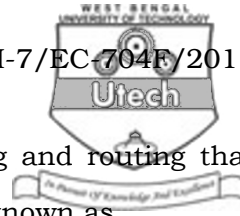
GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following :
 $10 \times 1 = 10$
 - i) In TMN terminology, the switching system, circuits, terminals, etc. which comprises a telecommunication network, are known as
 - a) OSS
 - b) NEs
 - c) MDs
 - d) Q adapter.
 - ii) How many OSI layers are there in TMN network ?
 - a) Three
 - b) Six
 - c) Eleven
 - d) Seven.
 - iii) Which transport layer protocol does SNMP uses for communication ?
 - a) TCP
 - b) UDP



- iv) Name the 2 well known ports that SNMP uses to operate.
- v) GSM is a
 - a) Switching Technology
 - b) Access Technology.
- vi) Early computer networks were designed to handle non-real time communication.
 - a) True
 - b) False
- vii) In circuit switched PSTN it is essential first to store voice message and then forward it to the next node.
 - a) True
 - b) False
- viii) The data networks are analog/digital in nature.
 - a) True
 - b) False
- ix) Internet employs circuit/packet switching.
 - a) True
 - b) False
- x) The users are directly connected to the
 - a) Local
 - b) Core network.
- xi) The core network is
 - a) Completely wireless
 - b) Primarily optical fiber based
 - c) Coaxial cable based
 - d) Only satellite based.



xii) Tasks such as switching, addressing and routing that are performed by the computers are known as

- a) Communication
- b) Networking
- c) Processing
- d) Delaying tasks.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. Name three of the seven fields of the SNMP v2 GETBULK
What are MIBs, and how are they accessed ?
What is the difference between management nodes and managed nodes? $2 + 1 + 2$
3. Briefly discuss the different commands than SNMP uses for its communication with suitable diagram. 5
4. What are the advantages of using SNMP in network management ?
What is Structure of Management Information (SMI) ?
Why SNMP is called Client Pull and Server Push Model ?
 $2 + 1 + 2$
5. Write short notes on $2 \frac{1}{2} \times 2$
 - a) SDH
 - b) SONET
6. What do you know about Web Based Network management and Desktop based Network Management system ? $2 \frac{1}{2} + 2 \frac{1}{2}$



GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. Compare management model and supervisory model used in Guerrilla Management Architecture. Clarify the Guerrilla Management Architecture. Show how the active probes are deployed from Nomadic managers. What are the features of a Nomadic management module ?
8. Discuss forward and backward signalling in Diff-serve networks. Explain a typical access network architecture and an ATM access network.
9. With a brief sketch discuss the principle of operation of an intelligent network system. Also explain how the system is managed.
10. Write short notes on any *two* of the following :
 - a) SNMP
 - b) Radio resource management
 - c) Management of converged network.
