



Name :

Roll No. :

Invigilator's Signature :

CS/B.Tech (ECE-NEW)/SEM-7/EC-704F/2010-11

2010-11

**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 × 1 = 10

- i) According to OSI model, V5 is a
 - a) Physical layer protocol
 - b) Data Link layer protocol
 - c) Session layer protocol.
- ii) For network management activities, a mail server acts as
 - a) a server
 - b) an agent
 - c) a server as well as an agent.
- iii) For network management, ASN . 1 (Abstract Syntax Notation one) is used by
 - a) TCP/IP model
 - b) OSI model
 - c) Both TCP/IP model and OSI model.



- iv) SNMP managers and agents are
 - a) both software modules
 - b) both hardware modules
 - c) either software or hardware modules.
- v) SNMP v2 has
 - a) 3 protocol messages
 - b) 5 protocol messages
 - c) 7 protocol messages.
- vi) Dense wave Division Multiplexing is used in
 - a) Optical media
 - b) Wireless media
 - c) Electromagnetic media.
- vii) CMIP (Common Management Information Protocol) has
 - a) 3 protocol messages
 - b) 5 protocol messages
 - c) 7 protocol messages.
- viii) Latency in Network management is
 - a) Query/Response time interval
 - b) Total response time
 - c) Link initialization time
 - d) None of these.
- ix) The physical conductivity in fault management in networks is tested by
 - a) a spectrum analyzer b) a cable tester
 - c) a network analyzer d) none of these.
- x) ISDN terminals can be
 - a) Only ISDN telephone b) PC only
 - c) Videophone only d) All of these.



- xi) SKIN in global communication includes
- a) network of networks only
 - b) countless sensors
 - c) both (a) and (b) and other devices
 - d) only antennas.
- xii) Convergence in telecommunication means
- a) only real time
 - b) only near real time
 - c) only non-real time
 - d) all the three operations.

GROUP – B

(Short Answer Type Questions)

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

2. What are the enhancements of SNMPv2 over SNMPv1 ? Explain how these enhancements help better Network Management.
3. Explain the function of various layers of services of TMN management service architecture.
4. Explain the salient features of Web-based Network Management. Name a few Web-based Network Management systems generally used by enterprises.
5. What are the four dimensions of converged networks ? Explain in brief.
6. How can we bypass active attacks on Mobile Adhoc networks ?



GROUP – C

(Long Answer Type Questions)

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

7. In telecommunication, what are the parameters that we manage for Quality of Services (QoS) ? In case of a network node that does not support SNMP, how is that node managed ? Write a short note on application performance management of VoIP. $2 + 3 + 10$
8. What is Optical Networking ? Write down the advantages of Optical Networking. Write briefly on the challenges of optical network management and measures adopted. $5 + 5 + 5$
9. a) What do you understand by the term “Information Modelling” ?
b) Explain its advantages, if any, using examples of available standard Information Models.
c) How does information modelling help efficient Network Management ? $3 + 6 + 6$
10. a) Describe different functional areas of network management defined by ISO 9000.
b) What are the various aspects of centralized and decentralized Telecommunication Network Management ?
c) What are the common procedures of reporting faults ? $5 + 5 + 5$
11. Write short notes on any *three* of the following : 3×5
- a) WiFi and Wimax
 - b) SNMP security parameters
 - c) Tunnelling
 - d) MIB.
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