



Name : .....  
Roll No. : .....  
Invigilator's Signature : .....

**CS/B.TECH(ECE)/SEP.SUPPLE/SEM-7/EC-704F/2012**

**2012**

**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) TMN management service provides support in which of the following aspects ?

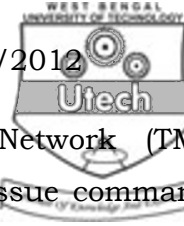
- I. Operations
- II. Maintenance
- III. Administration.

- a) I only
- b) I and II
- c) II and III
- d) I and III.





- v) Which of the following is the simplest error-detection method ?
- a) Parity
  - b) Longitudinal redundancy checking
  - c) Checksum checking
  - d) Cyclic redundancy checking.
- vi) Telnet, FTP, SMTP, DNS, HTTP are examples of protocols that are used in
- a) application layer of OSI reference model
  - b) presentation layer of OSI reference model
  - c) session layer of OSI reference model
  - d) data link layer of OSI reference model.
- vii) The frame alignment word is a sequence of bits that allows the start of each STM-1 frame to be clearly identified within SDH network. It is contained within
- a) Regenerator section overhead
  - b) Multiplex section overhead
  - c) Synchronous section overhead
  - d) Sequence section overhead.



viii) In Telecommunication Management Network (TMN) system, the role of the manager is to issue commands and requests to the agent. These commands and requests are known as

- a) notifications
- b) feedbacks
- c) operations
- d) acknowledgements.

ix) ..... is one of the Telecommunication Management Network (TMN) functional blocks that will convert TMN information into a format that can be easily understood by the user.

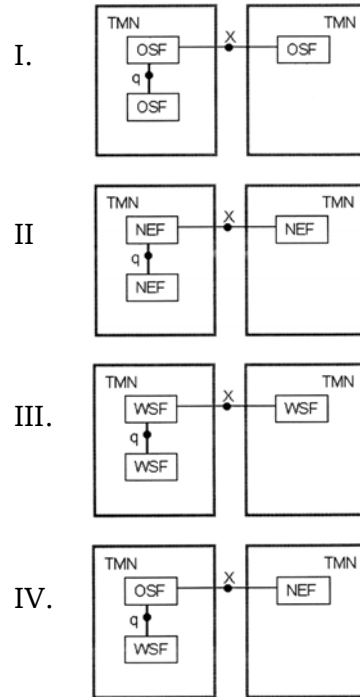
- a) Operations system function block
- b) Workstation function block
- c) Reference function block
- d) Network element function block.

x) ..... is the standard defined by the American National Standard Authority, ANSI T1 for synchronous operation used in North America.

- a) DXC
- b) STM-1
- c) ADM
- d) SONET.



xi) What is the correct picture(s) illustrating the aspects of TMN Functional Architecture ?



- a) I and II
- b) II and IV
- c) I only
- d) All of these
- e) None of these.

xii) The Internet offers which of the following advantages ?

- a) It offers a relatively low cost method of wide-area networking for the smaller company
- b) It enables companies to reach new markets
- c) It is relatively easy to create a simple website
- d) The use of web browsers gives a reasonably consistent, easy to use interface
- e) All of these.



**GROUP – B**

**( Short Answer Type Questions )**

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

2. Define communication protocols and standards.
3. How does the interest traffic pass ? Describe in short with the help of RMON.
4. How do the different implementation issues play important role in TMN ?
5. Define (i) ASN1, (ii) GDMO Object Oriented Design.
6. Explain in detail about organization model.

**GROUP – C**

**( Long Answer Type Questions )**

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

7. a) Discuss about goals and functions of network management system.  
b) Explain about the future of network management.  
c) Define Telecommunication network management system.  $7 + 6 + 2$
8. a) Explain in detail about SNMPv2 management information base and its protocol.  
b) With proper diagram, discuss briefly SNMP communication protocol.  
c) What are network management tools ?  $8 + 3 + 4$



9. a) Explain about NMS with web interface and web based management.
- b) Explain about management of a storage area network.

8 + 7

10. a) What is RMON SMI ?
- b) State the difference between RMON SMI and MIB.
- c) Discuss about Enterprise management solution.

3 + 6 + 6

11. a) Discuss about management of a storage area network.
- b) Give an idea about integrated view of TMN.
- c) What improvement do you observe in SNMPv2 over SNMPv1 ?

5 + 5 + 5

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