



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.

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the following is NOT  
al areas?

- 2

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- 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.

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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.

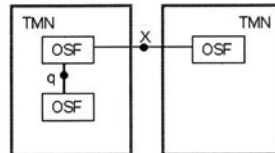
- a) Operations system function block
- b) Workstation function block
- c) Reference function block
- d) Network element function block.

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

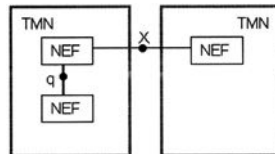
- a) DXC                                      b) STM-1
- c) ADM                                     d) SONET.



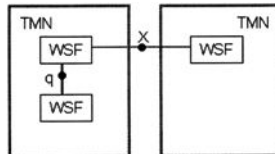
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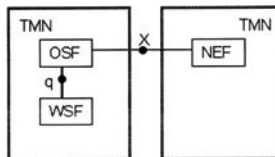
II



### III.



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**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 ?  $8 + 3 + 4$

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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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