

**IV B.Tech I Semester Regular Examinations, November 2008**  
**NETWORK MANAGEMENT SYSTEMS**  
( Common to Computer Science & Engineering and Computer Science &  
Systems Engineering)

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. Explain about the protocol data unit communication model between end systems. [16]
2. Explain how the IP address bits are split between subnet and host addresses. The network addresses 172.16.x.0 are subnets derived from the network address 172.16.0.0. [16]
3. Explain the SNMP GetRequest-PDU operation for a System Group with neat diagram. [16]
4. What are Notification Definitions? Explain the Notification type macro the help of an example. [16]
5. (a) Explain the different stages in Remote Network Monitoring Management Information Base.  
(b) Explain the various functions associated with RMOM1 MIB. [6+10]
6. (a) Give the complete list of the services provided by TMN.  
(b) Give brief description about management service architecture of TMN. [8+8]
7. (a) Explain the use of traffic load monitoring.  
(b) Give brief description about protocol analyzer with RMON.  
(c) What are different network routing tools? Explain. [6+6+4]
8. (a) Give brief description about DMI's MIB.  
(b) What are the standards that are available for managing of Management Application? [8+8]

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1. Explain the Protocol Data Units communication model between end systems. [16]
2. Define ranged object, also explain the conceptual views of a managed object. [16]
3. The following data response information is received by the manager for a get-request with a varBindlist. Compose:
  - (a) the get-request PDU, and
  - (b) the get-response PDU. [16]

Object	Value
Error Status	Too big
Error Index	udpInErrors
udpInDatagrams	500,000
udpNoPorts	1,000
udpInErrors	5,000
udpOutDatagrams	300,000

4. (a) Explain the changes made to the system group as well as SNMP group in SMPv2:  
 (b) Describe the following with suitable examples:
  - i. SNMP trap (4)
  - ii. SNMP trap(5)
  - iii. SNMP trap(6). [8+8]
5. (a) Define Remote Network Monitoring. Explain the network configuration of Remote Network Monitoring with neat diagram.  
 (b) List out the advantages of RMON devices. [10+6]
6. (a) Explain the operations system for traffic measurement.  
 (b) Give brief description about TMN conceptual model. [8+8]
7. (a) Explain in detail about the network management system requirements.  
 (b) Give brief description about functional NMS configuration. [10+6]
8. (a) List and explain the various components of web based enterprise management.  
 (b) Give brief description about CIMOM. [10+6]

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1. (a) Explain the internet configuration for a TCP/IP Based Networks?  
(b) Explain about the gateway communication to a proprietary sub network. [8+8]
2. Describe the SNMP network management architecture with the help of a neat diagram. [16]
3. Describe the SNMP GetNextRequest with indices. [16]
4. Explain the SNMPv2 conformance statements with suitable example. [16]
5. (a) Explain the various functions and tables associated with Ring station and Source routing group of RMON token ring.  
(b) Explain the different alarms and events generated by filters of RMON1. [8+8]
6. (a) Compare the functionalities of TMN functional architecture and TMN Physical architecture.  
(b) Explain about TMN Information architecture. [10+6]
7. (a) Explain the different SNMP MIB tools with example.  
(b) What is the use of protocol analyzer. Explain the basic configuration of protocol analyzer. [8+8]
8. (a) What are the sub classes of the logical element? Explain them.  
(b) Explain briefly about CIM object manager & protocol provider. [8+8]

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1. (a) Which element of managing the network require most of the time? What percentage of time is spent on maintaining compared to growth?  
(b) What are the top challenges in managing the networks? [8+8]
2. (a) Explain how the communication is carried out in a managed object with only a type and instance.  
(b) Describe about the different formats of declaration of OBJECT IDENTIFIER. [8+8]
3. Explain the SNMP GetRequest operation for the MIB. [16]
4. Generate an ASN.1 OBJECT-GROUP macro for the address translation group in SNMPv2 implementation. [16]
5. (a) With a neat diagram, explain the RMON1 groups and functions.  
(b) Give brief description about the history group of RMON1. [12+4]
6. (a) Mention the reasons for using operations system for Traffic Measurement.  
(b) Discuss the operations system for testing transmission.  
(c) List the advantages of TMN. [6+6+4]
7. (a) Give brief description about enterprise management solutions.  
(b) Explain the low-end system management. [10+6]
8. (a) Draw the architecture of java Dynamic management agent and explain.  
(b) Explain the simplified WBEM CIM core model. [10+6]

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