



VALLIAMMAI ENGINEERING COLLEGE

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

QUESTION BANK

SUBJECT : NE7007 - NETWORK MANAGEMENT

SEM / YEAR : III / II year M.E. (Communication Systems)

UNIT– I FUNDAMENTALS OF COMMON NETWORK TECHNOLOGY

PART –A

1. What is Network topology?
2. What is the most common bus based LAN ? Write the classification
3. Define Virtual LAN.
4. List the Network Node Components.
5. How hub is used in network ?
6. What is the purpose of bridges in the network ?
7. Write the classification of bridges .
8. Why router act as the backbone of networking?
9. How router is configured in the network?
10. Draw the protocol converter configuration .
11. What is Gateway?
12. How WAN is partitioned?
13. Differentiate between wired and wireless transmission .
14. List the services of OSI layers.
15. What is the goal of Network Management?
16. What is system management?
17. Draw the Dumbell architecture for Network management.
18. Write the functional groupings of network management .
19. What is fault management ?
20. How network configuration is managed?

PART –B

1. Explain about the network management architecture and organization.
2. Discuss about the goals and functions of network management.
3. Explain in detail about Ethernet.
4. What are the important network node components in a network ? Explain the components In detail.
5. What is transmission technology ? Explain the classification of technology in brief.
6. Draw and explain the broadband services network.
7. Write a note on (i) VLAN (ii) WAN (iii) FDDI (iv) Token Ring
8. Describe the communication protocols and standards.
9. Explain about the network topology in the perspective of network management.

10. Enumerate and explain the functions and applications of hubs and bridges
11. Explain the principle advantages of ISDN with neat diagrams .
12. Write a note on (i) Bridges (ii) gateways (iii) Switches (iv) Hubs

UNIT II – OSI NETWORK MANAGEMENT

PART –A

1. Write the classification of OSI network management model.
2. Define organizational model.
3. What is two – tier and three – tier network management organization model?
4. What is Informational model?
5. Draw the network configuration with data and information base .
6. What is SMI?
7. What is MIB?
8. Give some examples that can be stored in MIB .
9. How managed objects are represented in the internet model?
10. Define communication model.
11. What is the purpose of CMIP?
12. How to define the managed objects in the internet ?
13. What is ASN.1 ?
14. List the data type structure and tag of ASN.1
15. Define BER.
16. Draw the TLV Encoding structure .
17. What is ASN.1 macros?
18. Write the structure of ASN>1 macros.
19. Define functional model.
20. Classify the network management functional model.

PART –B

1. Explain about network management models.
2. Describe the network management organizational model.
3. Illustrate the management information model .
4. Explain the conceptual view of managed object .
5. Describe the communication model.
6. Explain about the terminology . symbols and conventions of ASN.1
7. Explain about the data types used to describe objects in the context of SMI and MIB.
8. Describe the encoding structure of ASN.1 .
9. Explain macros of ASN.1 with an example.
10. Describe the functional model.
11. Give an account of encoding structure in OSI networks.
12. Explain the general OSI network management with a neat diagram.

UNIT III – INTERNET MANAGEMENT

PART – A

1. Mention the two tier organizational model of SNMP.
2. Write the object type and object instances used to compose the managed object in SMI .
3. What is MIB ? Mention the object groups associated with it .
4. What is an Interface Group ?
5. What does SNMP architecture consists of in the SNMP communication model?
6. What is SNMP community profile?
7. List the SNMP protocol specifications.
8. Mention the areas of functions addressed by the OSI model.
9. What are the changes introduced by SNMPv2?
10. Draw the SNMPv2 Internet group.
11. What is SNMP proxy server?
12. What is remote monitoring?
13. Mention the RMON1 groups and functions.
14. What is the relationship between control and data tables ?
15. In what way RMON2 differ from RMON 1?
16. What is textual conventions?
17. Define table.
18. List the parameters under ICMP Group.
19. What is Address translation group?
20. What is the function of Network mask?

PART – B

- 1.Explain about the classes of a network .
- 2.Explain about the object DESCRIPTOR and syntax for the SNMP managed utilities with an example.
- 3.Explain in detail about the MIB group which contains the information about physical location of the component.
- 4.Explain how you would determine whether a device is acting as a host or as a router using SNMP command.
- 5.What OBJECT TYPE would you use to identify the address of the neighbouring gateway from your local gateway.
- 6.Draw a MIB tree for FDDI MIB . Limit your tree to the top five group.
- 7.Explain about SNMP operation in detail .
- 8.Describe SNMPv2 MIB with appropriate macros.
- 9.Generate an ASN.1 OBJECT GROUP macro for address translation group in SNMPv2 implementation.
- 10.describe about RMON1 common and Ethernet group.
- 11.Explain the system overview of SNMP in detail .
12. Explain the principle of SNMP proxy server with a neat sketch.

UNIT IV – BROADBAND NETWORK MANAGEMENT

PART –A

- 1.What is the need for TMN?
- 2.What is the relationship between data and telecommunication networks?
- 3.What is conceptual model?
- 4.List the classification of TMN architecture.
- 5.How TMN information architecture is deployed ?
- 6.What are broadband services networks?
7. Define VPC.
8. What is the role of SNMP and ILMI in ATM management ?
9. Where M1 interface is employed?
10. What is ATM LANE ?
11. What is the purpose of M2 interface ?
12. What type of interface is observed in customer network management of a public network?
13. How public network management is performed ?
14. What is configuration management?
15. What are the functions comes under fault management?
16. What is performance management?
17. How subnetwork connection management is employed ?
18. What is ATM digital exchange interface management?
19. What is MPLS network?
- 20.What is the performance of ATM MIB?

PART – B

1. When communication between the ATM switches is broken , what type of Mx interface to be used ? Explain.
2. Describe in detail about the TMN conceptual model.
3. Draw and explain the TMN architecture.
4. Explain about the ATM technology and Virtual path and virtual circuit.
5. Describe about ATM network management.
6. Describe the management of ATM network elements.
7. Explain in detail how to manage a private network?
8. Describe the customer network management of a public network management.
9. Write a brief note on public network management.
10. Describe about TMN management service architecture.
11. Discuss the principle of ATM digital Exchange Interface management.
12. Discuss the role of ILMI in ATM management

UNIT V – NETWORK MANAGEMENT APPLICATIONS

PART –A

1. Give the case studies of the applications of network management.
2. What is the role of network management in accounting management?
3. List the process involved in fault management.
4. What is data monitoring?
5. What are the parameters that define the network management?
6. What is RBR?
7. Draw generic architecture of event correlation system.
8. What is cryptography?
9. Mention the guides to setup policies and procedures.
10. Define authentication.
11. What is ticket granting system?
12. Define firewall.
13. What is Code based reasoning?
14. What is network provisioning?
15. What is digital signature?
16. What is message transfer management?
17. What are the process involved in SLM?
18. What is packet filtering?
19. How fault detection is accomplished?
20. What are performance metrics?

PART – B

1. Describe the applications of network management in configuration management and security management in detail.
2. Write notes on 9i) Event correlation techniques 9ii) Service level management.
3. Explain the types of firewalls in detail.
4. Compare the management protocols.
5. List and contrast the tools available to discover the network components.
6. Explain in detail about report management and policy based management.
7. Describe in detail about the configuration management.
8. What is security management? Discuss in detail.
9. Explain about event correlation techniques.
10. Write a note on (i) Web based management (ii) XML based management
11. Describe about codebook correlation model.
12. What is secure communication network? Explain security breaches and the resource needed to prevent it.