Unit-V

1. What is SNMP used for in network management?

   a. Simple Network Protocol

   b. System Network Management Protocol

   c. Secure Network Management Protocol

   d. Simple Network Management Protocol ✓

2. Which layer of the OSI model is primarily associated with network management?

   a. Data link layer

   b. Network layer

   c. Application layer

   d. Presentation layer ✓

3. What is the purpose of ICMP in network management?
   a. Internet Control Message Protocol
   b. Internet Connection Management Protocol
   c. Internet Configuration Message Protocol
   d. Internet Communication Management Protocol

4. What is the role of a Network Management System (NMS) in network administration?
   a. To configure routers and switches
   b. To monitor and manage network devices
   c. To establish network connections
   d. To encrypt network traffic

5. Which of the following is a key component of SNMP architecture?
   a. Network Interface Card (NIC)
   b. Management Information Base (MIB)
   c. Transmission Control Protocol (TCP)
   d. Internet Protocol (IP)

6. What is the purpose of the Simple Network Management Protocol (SNMP) trap?
   a. To request information from a managed device
   b. To report an event or alert to the NMS
   c. To configure network devices
   d. To establish a secure connection

7. In the context of network management, what does RMON stand for?
   a. Remote Monitoring
   b. Rapid Management Operations Network
   c. Resource Management Online
   d. Reliable Monitoring and Operations Network

8. What does the term 'bandwidth' refer to in networking?
   a. The speed of data transmission over a network
   b. The number of devices in a network
   c. The physical size of a network
   d. The security level of a network

9. What is the main function of a network protocol analyser?
   a. To configure network protocols
   b. To monitor and analyse network traffic
   c. To establish network connections
   d. To manage network devices

10. Which protocol is commonly used for secure management of network devices?
    a. HTTP   b. FTP
    c. SNMPv3   d. Telnet

11. What does SNMP stand for in networking?
    a. Simple Network Messaging Protocol
    b. Secure Network Management Protocol
    c. Simple Network Management Protocol
    d. System Network Maintenance Protocol

12. Which layer of the OSI model is SNMP associated with?
    a. Data link layer   b. Application layer
    c. Network layer   d. Transport layer

13. What is the primary purpose of SNMP?
    a. To secure network communication
    b. To manage and monitor network devices
    c. To establish network connections
    d. To configure routers and switches

14. What role does the Management Information Base (MIB) play in SNMP?
    a. It is a protocol for communication between SNMP agents
    b. It defines the structure and organisation of information in SNMP
    c. It is a network device that responds to SNMP requests
    d. It encrypts SNMP messages for secure communication

15. SNMP primarily operates over which transport protocol?
    a. UDP   b. TCP
    c. IP   d. ICMP

16. Which SNMP version introduced security features like authentication and encryption?
    a. SNMPv1   b. SNMPv2c
    c. SNMPv3   d. SNMPv4

17. What is an SNMP agent?
    a. A network management system
    b. A device that sends SNMP traps
    c. A software module on a managed device that collects and stores information
    d. A protocol used for secure communication in SNMP

18. Which SNMP message type is used by the SNMP manager to request information from the agent?
    a. GetNextRequest   b. GetRequest
    c. SetRequest   d. Trap

19. What is the purpose of an SNMP trap?
    a. To authenticate SNMP messages
    b. To request information from a managed device
    c. To report an event or alert to the SNMP manager
    d. To establish a secure connection

20. In SNMP, what is the significance of the community string?
   a. It is a password for SNMPv3 authentication
   b. It identifies the SNMP manager in the network
   c. It acts as a basic form of SNMP security, serving as a shared secret
   d. It is used to encrypt SNMP messages

21. What does SNMPv1 stand for in networking?
   a. Simple Network Messaging Protocol version 1
   b. Secure Network Management Protocol version 1
   c. Simple Network Management Protocol version 1
   d. System Network Maintenance Protocol version 1

22. Which SNMPv1 component stores information about managed devices in a hierarchical structure?
   a. SNMP manager
   b. SNMP Agent
   c. MIB (Management Information Base)
   d. OID (Object Identifier)

23. In SNMPv1, what is the function of the SNMP Manager?
   a. To collect and store information about managed devices
   b. To respond to SNMP traps sent by agents
   c. To initiate requests for information from SNMP agents
   d. To authenticate SNMP messages

24. What is an Object Identifier (OID) in SNMPv1?
   a. A unique identifier for SNMP managers
   b. A numerical label that uniquely identifies managed objects in the MIB
   c. A protocol used for SNMP communication
   d. An encryption key for SNMPv1 messages

25. Which SNMPv1 message type is used by the SNMP Manager to retrieve information from a managed device?
   a. GetNextRequest
   b. GetRequest
   c. SetRequest
   d. Trap

26. What is the primary communication facility used by SNMPv1 for manager-agent interaction?
   a. HTTP
   b. Telnet
   c. SNMP protocol
   d. ICMP

27. What is the community string in SNMPv1 used for?
   a. It is a password for SNMPv1 authentication
   b. It identifies the SNMP manager in the network
   c. It acts as a basic form of SNMPv1 security, serving as a shared secret
   d. It is used to encrypt SNMPv1 messages

28. In SNMPv1, which SNMP message type is sent by an agent to inform the manager about an event or alert?
   a. GetRequest   b. SetRequest
   c. Trap   d. GetResponse

29. What is the primary drawback of SNMPv1 in terms of security?
   a. Lack of community strings
   b. Lack of encryption for SNMP messages
   c. Lack of authentication for SNMP messages
   d. Lack of support for SNMP traps

30. In SNMPv1, what is the role of the Management Information Base (MIB)?
   a. It encrypts SNMP messages for secure communication
   b. It defines the structure and organisation of information in SNMPv1
   c. It is a software module on a managed device that collects and stores information.
   d. It represents a hierarchical tree structure that contains information about managed devices

31. What does SNMPv3 stand for in networking?
   a. Secure Network Messaging Protocol version 3
   b. Simple Network Maintenance Protocol version 3
   c. System Network Management Protocol version 3
   d. Simple Network Management Protocol version 3

32. Which security features were introduced in SNMPv3 to address limitations in SNMPv1 and SNMPv2?
   a. Authentication and encryption
   b. Digital signatures
   c. Biometric authentication
   d. Secure Sockets Layer (SSL)

33. In SNMPv3, what is the purpose of the SNMP Engine ID?
   a. It identifies the SNMP Manager in the network
   b. It is a numerical label for identifying managed objects in the MIB)
   c. It uniquely identifies each SNMP entity in the network
   d. It encrypts SNMP messages

34. What is the role of the User-based Security Model (USM) in SNMPv3?
   a. To define the structure of the Management Information Base (MIB)
   b. To establish communication between the SNMP manager and agent
   c. To provide authentication and privacy for SNMP messages
   d. To define the community strings used for SNMP communication

35. In SNMPv3, what is the purpose of the View-based Access Control Model (VACM)?
   a. To encrypt SNMP messages
   b. To define the structure of the Management Information Base (MIB)
   c. To control access to MIB objects based on security policies
   d. To establish a secure connection between the SNMP manager and agent

36. Which SNMPv3 security parameter ensures that the SNMP message has not been altered during transmission?
   a. Context name
   b. Authentication Header (AuthHeader)
   c. Privacy protocol
   d. SNMP engine ID

37. What is the purpose of the SNMPv3 context in message processing?
   a. To identify the SNMP entities in the network
   b. To group SNMP messages for efficient processing
   c. To distinguish multiple instances of MIB data on a target entity
   d. To define the structure of the MIB

38. In SNMPv3, which protocol is commonly used for secure communication between the manager and agent?
   a. HTTP
   b. TCP
   c. SNMPv3 with TLS/DTLS
   d. SNMPv3 with SNMP over SSH

39. What is the significance of the SNMPv3 security level 'noAuthNoPriv'?
   a. Authentication is required, but privacy is not
   b. Both authentication and privacy are required
   c. Neither authentication nor privacy is required
   d. Privacy is required, but authentication is not

8.

40. **What is the primary advantage of SNMPv3 over SNMPv1 and SNMPv2 in terms of security?**

a. SNMPv3 uses a simpler authentication process

b. SNMPv3 supports encryption for secure communication

c. SNMPv3 has a larger community string length

d. SNMPv3 does not use community strings

9.