1. What is the major advantage of STP over UTP?
   A. greater segment length
   B. less expensive
   C. lighter weight
   D. more effective electro-magnetic protection

2. A network hub
   A. routes different data packets
   B. connects multiple hosts
   C. determines IP address destinations
   D. switches data packets between networks

3. Where in the OSI model does the application layer reside?
   A. 4
   B. 5
   C. 6
   D. 7

4. Where in the OSI model does the network layer reside?
   A. 1
   B. 2
   C. 3
   D. 4

5. The SNA acronym identifies
   A. Server Network Access
   B. Systems Network Access
   C. Systems Network Architecture
   D. Support Network Architecture

6. SMTP is primarily used to
   A. transfer network mail
   B. transfer IP addresses
   C. interpret MAC addresses
   D. provide naming services

7. How many bits are contained in a TCP/IP Version 4 IP address?
   A. 8
   B. 16
   C. 32
   D. 64
8. Which OSI layer relates to the packet layer in the X.25 protocol standard?
   A. transport layer
   B. session layer
   C. network layer
   D. data link layer

9. Which protocol communicates management information between network elements?
   A. SMTP
   B. TFTP
   C. HTTP
   D. SNMP

10. What is a common technique for detecting data transmission errors?
    A. RCC
    B. STM
    C. PRE
    D. CRC

11. Which NonStop Server product best supports bulk data transfer to an IBM mainframe in an
    SNA environment?
    A. TCP/IP
    B. SNAX/APC
    C. VTAM
    D. ES Connect

12. Which product best supports the interconnection of multiple NonStop Servers?
    A. ES Connect
    B. SNAX/XF
    C. Expand
    D. OSI/MHS

13. A TCP/IP network of 100 users is connected to a NonStop Server using two ports on an
    E4SA adapter. Which event has the greatest effect on service availability?
    A. E4SA adapter failure
    B. E4SA port failure
    C. single processor failure on the NonStop Server
    D. five second power interruption to the NonStop Server

14. You are connecting three NonStop Servers in an Expand network. Which method provides
    the greatest level of fault tolerance?
    A. ring network, multi-line paths
    B. bus network, multi-CPU paths
    C. ring network, multi-CPU paths
    D. bus network, multi-line paths
15. To which type of SNA network can the NonStop Server connect?
   A. subarea (hierarchical) only
   B. advanced peer-to-peer only
   C. both subarea and advanced peer-to-peer
   D. neither subarea nor advanced peer-to-peer

16. Which object provides application socket access in Parallel Library TCP/IP?
   A. TCPMAN
   B. TCPMON
   C. TCPSAM
   D. ZTCPSRL

17. Which SCF command configures an ATM address?
   A. alter adapter
   B. alter line
   C. set line
   D. add line

18. Which SCF command configures OSI addresses for OSI/MHS?
   A. ALTER ROUTE
   B. ALTER MHSADDR
   C. ADD OSIA
   D. ADD MTA

19. What is the function of PIN 2 in an RS232 cable connector?
   A. receive data
   B. data set ready
   C. clear to send
   D. transmit data

20. Which SCF command displays configured IP addresses?
   A. status route $*.*
   B. status subnet $*.*
   C. info route $*.*
   D. info subnet $*.*

21. Which SCF command can be used to view TCP/IP network throughput?
   A. stats process $ztc0
   B. status process $ztc0
   C. trace process $ztc0
   D. info process $ztc0

22. Which SCF command is used to view E4SA network throughput?
   A. info pif $zzlan.*
   B. trace path $zzlan.*
   C. stats pif $zzlan.*
   D. stats adapter $zzlan.*
23. Which SCF command verifies that the LAN manager process is started?
   A. info subsys $zzlan
   B. status process $zzkrn.#zzlan
   C. info process $zzkrn.#zzlan
   D. status subsys $zzlan

24. What is subordinate to the SCF PATH object in the Expand subsystem hierarchy?
   A. PROCESS
   B. ENTRY
   C. LINE
   D. DEVICE

25. What is the name of the ServerNet/FX subsystem monitor process?
   A. $ZEXP
   B. $ZNET
   C. $ZZNCP
   D. $ZZFOX

26. Which SCF object identifies the ServerNet/FX adapter?
   A. LBU
   B. SUBNET
   C. DEVICE
   D. PROCESS

27. Which SCF object represents a SWAN CLIP?
   A. LINE
   B. TASK
   C. SERVER
   D. DEVICE

28. What is the well-known default port number used by TELNET?
   A. 3
   B. 13
   C. 23
   D. 33

29. Which node types does SNAX/XF support?
   A. 1 and 5
   B. 2.0 and 1
   C. 2.1 and 4
   D. 4 and 5

30. Which communications product will support asynchronous connections only?
   A. SWAN
   B. FESA
   C. AWAN
   D. TRSA
31. What is required to connect to a TCP/IP application in addition to the IP address?
   A. device name
   B. socket number
   C. host name
   D. port number

32. What is the standard supported by iTP Webserver to provide security certificates?
   A. X.400
   B. X.409
   C. X.500
   D. X.509

33. SUBNET addressing allows
   A. the use of a bridge
   B. more network connections
   C. improved network performance
   D. more network hosts

34. Which term describes the database of SNMP-managed objects?
   A. MIB
   B. SNMP subagent
   C. PDU
   D. SNMP agent

35. Which unsolicited messages are sent to an SNMP manager?
   A. errors
   B. events
   C. traps
   D. tokens

36. What is a commonly used cryptographic system?
   A. ICMP
   B. CGI
   C. DES
   D. PDU
Objective: (663.1.1) Identify the network hardware components
Item: 663.1.1.m.1

1. What is the major advantage of STP over UTP?
   A. greater segment length
   B. less expensive
   C. lighter weight
   D. more effective electro-magnetic protection

References:  http://www.anixter.com/techlib/vendor/cabling/d0503p02.htm

Objective: (663.1.1) Identify the network hardware components
Item: 663.1.1.o.1

2. A network hub
   A. routes different data packets
   B. connects multiple hosts
   C. determines IP address destinations
   D. switches data packets between networks

References:  http://webopedia.internet.com/Hardware/Networking_Hardware/hub.html

Objective: (663.1.3) Define the layers of the OSI model
Item: 663.1.3.a.1

3. Where in the OSI model does the application layer reside?
   A. 4
   B. 5
   C. 6
   D. 7

            http://msnhomepages.talkcity.com/LibraryLawn/brownbr/datacomm/dc_018.htm
Objective: (663.1.3) Define the layers of the OSI model
Item: 663.1.3.c.1

4. Where in the OSI model does the network layer reside?
   A.  1
   B.  2
   C.  3
   D.  4


Objective: (663.1.4) Identify the major LAN/WAN protocols
Item: 663.1.4.g.1

5. The SNA acronym identifies
   A.  Server Network Access
   B.  Systems Network Access
   C.  Systems Network Architecture
   D.  Support Network Architecture

References:  http://www.techweb.com/encyclopedia/defineterm?term=SNA
             http://www.protocols.com/pbook/sna.htm

Objective: (663.1.4) Identify the major LAN/WAN protocols
Item: 663.1.4.k.1

6. SMTP is primarily used to
   A.  transfer network mail
   B.  transfer IP addresses
   C.  interpret MAC addresses
   D.  provide naming services

References:  http://www.protocols.com/pbook/tcpip7.htm#SNMP

Objective: (663.1.5) Describe TCP/IP addressing
Item: 663.1.5.a.1

7. How many bits are contained in a TCP/IP Version 4 IP address?
   A.  8
   B.  16
   C.  32
   D.  64

References:  TCP/IP and IPX/SPX Programming Manual - 426001-001, Addressing, Internet Addresses
Objective: (663.1.3) Define the layers of the OSI model
Item: 663.1.3.h.1

8. Which OSI layer relates to the packet layer in the X.25 protocol standard?
   A. transport layer
   B. session layer
   C. **network layer**
   D. data link layer

References:  

Objective: (663.1.6) Explain the usage of major TCP/IP services
Item: 663.1.6.f.1

9. Which protocol communicates management information between network elements?
   A. SMTP
   B. TFTP
   C. HTTP
   D. **SNMP**

References:  
http://www.cis.ohio-state.edu/htbin/rfc/rfc1157.html

Objective: (663.1.7) Identify key data communications concepts and definitions
Item: 663.1.7.i.1

10. What is a common technique for detecting data transmission errors?
    A. RCC
    B. STM
    C. PRE
    D. **CRC**

References:  
http://webopedia.com/

Objective: (663.2.1) Determine the system connectivity requirements
Item: 663.2.1.a.1

11. Which NonStop Server product best supports bulk data transfer to an IBM mainframe in an SNA environment?
    A. TCP/IP
    B. SNAX/APC
    C. VTAM
    D. **ES Connect**

References:  
Introduction to Tandem Networking and Data Communications for Server S-Series Servers-420092-001, Systems Network Architecture (SNA) Network Connections, ES Connect
Objective: (663.2.1) Determine the system connectivity requirements
Item: 663.2.1.e.1

12. Which product best supports the interconnection of multiple NonStop Servers?
   A. ES Connect
   B. SNAX/XF
   C. Expand
   D. OSI/MHS

References: Introduction to Tandem Networking and Data Communications for Server S-Series servers-420092-001, Expand Network

Objective: (663.2.3) Describe methods of providing fault tolerance to a networking solution
Item: 663.2.3.a.1

13. A TCP/IP network of 100 users is connected to a NonStop Server using two ports on an E4SA adapter. Which event has the greatest effect on service availability?
   A. E4SA adapter failure
   B. E4SA port failure
   C. single processor failure on the NonStop Server
   D. five second power interruption to the NonStop Server

References: Introduction to Networking for NonStop S-Series servers-520670-001, TCP/IP Network Connections

Objective: (663.2.3) Describe methods of providing fault tolerance to a networking solution
Item: 663.2.3.c.1

14. You are connecting three NonStop Servers in an Expand network. Which method provides the greatest level of fault tolerance?
   A. ring network, multi-line paths
   B. bus network, multi-CPU paths
   C. ring network, multi-CPU paths
   D. bus network, multi-line paths

References: EXPAND Configuration and Management Manual-520599-001, Planning for ServerNet Clusters, ServerNet Clusters Connected by APM or IP Lines

Objective: (663.3.2) Identify S-series supported network architectures
Item: 663.3.2.a.1

15. To which type of SNA network can the NonStop Server connect?
   A. subarea (hierarchical) only
   B. advanced peer-to-peer only
   C. both subarea and advanced peer-to-peer
   D. neither subarea nor advanced peer-to-peer

Objective: (663.3.3) Describe communication subsystems configuration for S-series
Item: 663.3.3.q.1

16. Which object provides application socket access in Parallel Library TCP/IP?
   A. TCPMAN
   B. TCPMON
   C. TCPSAM
   D. ZTCPSRL

References: TCP/IP Parallel Configuration and Management Manual-522271-001

Objective: (663.3.4) Describe the configuration of addressing schemes
Item: 663.3.4.b.1

17. Which SCF command configures an ATM address?
   A. alter adapter
   B. alter line
   C. set line
   D. add line

References: ATM Configuration and Management Manual-422840-001, Configuration Quick Start, Task 4: Configuring the ATM Address

Objective: (663.3.4) Describe the configuration of addressing schemes
Item: 663.3.4.c.1

18. Which SCF command configures OSI addresses for OSI/MHS?
   A. ALTER ROUTE
   B. ALTER MHSADDR
   C. ADD OSIA
   D. ADD MTA

References: OSI/MHS Configuration and Management Manual-424827-001, Management Environment for OSI/MHS, Examples of Commands for MTA Objects

Objective: (663.6) Describe the types and specifications of physical interfaces to S-series systems
Item: 663.3.6.a.1

19. What is the function of PIN 2 in an RS232 cable connector?
   A. receive data
   B. data set ready
   C. clear to send
   D. transmit data

Objective: (663.4.2) Describe tools, commands, and utilities used in troubleshooting
Item: 663.4.2.b.1

20. Which SCF command displays configured IP addresses?
   A. status route $*.*
   B. status subnet $*.*
   C. info route $*.*
   D. info subnet $*.*

References: TCP/IP Configuration and Management manual 140771, Page 4-50

Objective: (663.4.3) Discuss how to identify network performance issues
Item: 663.4.3.b.1

21. Which SCF command can be used to view TCP/IP network throughput?
   A. stats process $ztc0
   B. status process $ztc0
   C. trace process $ztc0
   D. info process $ztc0

References: TCP/IP Configuration and Management manual 140771, Page 4-69

Objective: (663.4.3) Discuss how to identify network performance issues
Item: 663.4.3.e.1

22. Which SCF command is used to view E4SA network throughput?
   A. info pif $zzlan.*
   B. trace path $zzlan.*
   C. stats pif $zzlan.*
   D. stats adapter $zzlan.*

References: LAN Configuration and Management manual 425686-001, Page 4-59

Objective: (663.4.4) Describe communication subsystems hierarchies
Item: 663.4.4.a.1

23. Which SCF command verifies that the LAN manager process is started?
   A. info subsys $zzlan
   B. status process $zzkrn.#zzlan
   C. info process $zzkrn.#zzlan
   D. status subsys $zzlan

References: SWAN Concentrator and WAN Subsystem Troubleshooting Guide 424718-001, Page 3-2
Objective: (663.4.4) Describe communication subsystems hierarchies

Item: 663.4.4.d.1

24. What is subordinate to the SCF PATH object in the Expand subsystem hierarchy?
   A. PROCESS
   B. ENTRY
   C. LINE
   D. DEVICE

References: Expand Configuration and Management Manual 425826-001, Page 13-2

Objective: (663.4.4) Describe communication subsystems hierarchies

Item: 663.4.4.e.1

25. What is the name of the ServerNet/FX subsystem monitor process?
   A. $ZEXP
   B. $ZNET
   C. $ZZNCP
   D. $ZZFOX


Objective: (663.4.4) Describe communication subsystems hierarchies

Item: 663.4.4.f.1

26. Which SCF object identifies the ServerNet/FX adapter?
   A. LBU
   B. SUBNET
   C. DEVICE
   D. PROCESS


Objective: (663.4.4) Describe communication subsystems hierarchies

Item: 663.4.4.l.1

27. Which SCF object represents a SWAN CLIP?
   A. LINE
   B. TASK
   C. SERVER
   D. DEVICE

References: WAN subsystem Configuration and Management manual 425644-001, Page 6-3
Objective: (663.5.2) Demonstrate the application of network-related tools
Item: 663.5.2.e.1

28. What is the well-known default port number used by TELNET?
   A. 3
   B. 13
   C. 23
   D. 33

References: NonStop TCP/IP Applications User Guide 117469, Page 10-1

Objective: (663.5.3) List S-series communication access methods
Item: 663.5.3.b.1

29. Which node types does SNAX/XF support?
   A. 1 and 5
   B. 2.0 and 1
   C. 2.1 and 4
   D. 4 and 5

References: Introduction to SNA Capabilities of Tandem NonStop Systems 134597, Page 2-4

Objective: (663.5.3) List S-series communication access methods
Item: 663.5.3.e.1

30. Which communications product will support asynchronous connections only?
   A. SWAN
   B. FESA
   C. AWAN
   D. TRSA


Objective: (663.5.4) Describe communication services and interfaces
Item: 663.5.4.d.1

31. What is required to connect to a TCP/IP application in addition to the IP address?
   A. device name
   B. socket number
   C. host name
   D. port number

References: Introduction to Networking and Data Communications for Server S-Series Servers 420092-001, Page 10-6
Objective: (663.5.6) Describe S-series web access methods and services
Item: 663.5.6.a.1

32. What is the standard supported by iTP Webserver to provide security certificates?
   A. X.400
   B. X.409
   C. X.500
   D. X.509

References: Introduction to Networking and Data Communications for Server S-Series Servers 420092-001, Page 11-3

Objective: (663.6.1) Describe methods to improve network performance and reliability
Item: 663.6.1.b.1

33. SUBNET addressing allows
   A. the use of a bridge
   B. more network connections
   C. improved network performance
   D. more network hosts

References: TCP/IP Configuration and Management Manual 140771, SCF Interface for Tandem NonStop TCP/IP, SCF for Tandem NonStop TCP/IP

Objective: (663.6.4) Discuss the functionality of network management tools
Item: 663.6.4.a.1

34. Which term describes the database of SNMP-managed objects?
   A. MIB
   B. SNMP subagent
   C. PDU
   D. SNMP agent

References: SNMP Configuration and Management Manual 142624, Page 1-9

Objective: (663.6.4) Discuss the functionality of network management tools
Item: 663.6.4.b.1

35. Which unsolicited messages are sent to an SNMP manager?
   A. errors
   B. events
   C. traps
   D. tokens

References: SNMP Configuration and Management Manual 142624, Page 1-6
Objective: (663.6.5) Discuss generic network security methods

Item: 663.6.5.c.1

36. What is a commonly used cryptographic system?
   A. ICMP
   B. CGI
   C. DES
   D. PDU

References: Common Knowledge