

## CENTRE FOR DEVELOPMENT OF ADVANCED COMPUTING Advanced Computing Training School



Date: 19-07-16

### **Course-end Re-examination**

Course Name: PG-DITISS	Mo	dule: Fundament	al of Computer Networks
Time: 11-12 AM	M	M-40	
Q.No.1) End-to-end connect A. the network layer B. the transport layer C. the session layer D. it is a combined fu			
Q.No.2) A subnet mask is u A. Identify different si B. Identify different si C. Mask the IP addre D. Identify the numb address	ubnets within a ubnets within a ess of a machin	an internet ne from hackers	network portion in the IP
Q.No.3) Which of the follow A. Packet level instru B. It prevents virus C. We can block cert D. Inspection of outgo	ction is possib ain connection	ole I	
Q.No.4) As data moves from TCP/IP network, headers a devices in the same layers (headers are getting	re getting (ie Layer X of l	but when	data moves between the
<ul><li>A. Deleted, Modified</li><li>B. Deleted, Added</li><li>C. Added, Modified</li><li>D. Modified, Added</li></ul>			
Q.No.5) Fig 1 denotes a and fig 2 denotes a			
	Fig 1	Fig 2	
	ТСР	ТСР	
	IP	IP	
	802.3	PPP	
	Physical Layer	Physical Layer	

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- A. LAN, WAN
- B. WAN, LAN
- C. LAN, LAN
- D. WAN, WAN
- Q.No.6) A router has the following (CIDR) entries in the routing table

Address/Mask	Next HOP
202.112.12.5/28	interface1
202.112.12.61/28	interface2
Default	interface3

If a packet comes with destination address 202.112.12.45 arrives at the router, on which interface it will be routed?

- A. interface1
- B. interface2
- C. interface3
- D. Packet will be dropped
- Q.No.7) What is the first field of the Ethernet frame without considering Preamble?
  - A. Destination MAC Address
  - B. Source MAC Address
  - C. Type
  - D. DATA
- **Q.No.8)** You have a class C network address divided into 3 subnets, you will add 2 subnets in the next 2 years each subnet will have 25 hosts. What subnet mask should you use to create those subnets without wasting the IP addresses?
  - A. 255.255.255.192
  - B. 255.255.255.248
  - C. 255.255.254
  - D. none of the above
- **Q.No.9)** For which of the following is UDP unsuitable? Choose the most appropriate answer.
  - A. FTP
  - B. DNS
  - C. SNMP
  - D. RTP
- **Q.No.10)** Some ranges of IP address has been reserved as Private Address and no packet containing these addresses may appear on the Internet. Which of the IP range is NOT reserved Private Address.
  - A. 10.0.0.0 10.255.255.255/8
  - B. 172.16.0.0 172.31.255.255/12
  - C. 192.168.0.0 192.168.255.255/16
  - D. 202.164.168.0 202.164.168.255/20

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- **Q.No.11)** Which of the following cable can be used for long distance reliable connectivity?
  - A. UTP Cable
  - B. Multi Mode Fiber
  - C. STP Cable
  - D. Single Mode Fiber
- Q.No.12) Match the Type and Value of DNS:

<b>0.12)</b> Match the Type and	value of DNS.
Type	Value
1. SOA	1. 32-bit Integer
2. PTR	2. Domain Name
3. MX	3. IP Address
4. CNAME	4. Priority, domain willing to accept emails
5. A	5. Parameter for zone
A. 1-2,2-3,3-1,4-5,5-4	
B. 1-4,2-3,3-1,4-5,5-2	

- **Q.No.13)** Which of the following IP Header field changes from HOP to HOP during routing?
  - A. Source IP Address

C. 1-5,2-3,3-4,4-2,5-1 D. 1-2,2-5,3-1,4-3,5-4

- B. Destination IP Address
- C. Both Source IP address and Destination IP address
- D. TTL (Time to Live)
- Q.No.14) Which TCP Flag does NOT affect in the state transition of TCP protocol?
  - A. PSH
  - B. RST
  - C. SYN
  - D. FIN
- **Q.No.15)** Which of the following statements are TRUE regarding routing in a TCP/IP networks.
  - i. Tcp layer header gets modified at the intermediate routers
  - ii. IP Layer header gets modified at the intermediate routers.
  - iii. Data Link Layer Header Gets modified at the intermediate Routers
  - A. Only iii
  - B. Only ii & iii
  - C. All the above
  - D. None of the above

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**Q.No.16)** Which of the following statements is/are TRUE regarding the Connection oriented are connection less service?

- i. Connection less service must need tight co-operation of all systems.
- The packet forwarding mechanism in connection-oriented service is more complex than the packet forwarding mechanism in connection less networks.
- iii. In connection Less networks every intermediate routers needs a rule to handle every possible packet that it may ever receive.
- A. i & ii
- B. Only ii
- C. Only iii
- D. ii & iii.

### Q.No.17) OSPF and BGP belongs to

- A. Inter AS Routing & Intra AS Routing
- B. Intra AS Routing & Inter AS Routing
- C. Both belong to Intra AS Routing
- D. Both belong to Inter AS Routing

**Q.No.18)** Consider the following network diagram, which contains 2 LANs and 1 WAN segment.. LAN₁ is having 25 systems and LAN₂ is having 55 systems to be connected using **192.168.1.0** network.



What is the most suitable CIDR (slash) notation to represent LAN1 and LAN2

- A. 25, 26
- B. 26,26
- C. 27,26
- D. 27,25

Q.No.19) Which type of network uses dual fibre-optic rings?

- A. FDDI
- B. Ethernet
- C. Token Ring
- D. ATM

Q.No.20) Which protocol is connection oriented?

- A. UDP
- B. TCP
- C. IP
- D. ICMP

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- Q.No.21) At which layer of the OSI model, does FTP operate?
  - A. Application
  - B. Presentation
  - C. Session
  - D. Transport
- **Q.No.22)** Routers can be configured using several sources. Select which of the following sources can be used.
  - A. DNS Server
  - B. Floppy disk
  - C. TFTP Server
  - D. SMTP Server
- Q.No.23) Which of the following true regarding switches and hubs:
  - A. Switches take less time to process frames than hubs take
  - B. Hubs can filter frames
  - C. Switches do not forward broadcasts
  - D. Switches increase the number of collision domains in the network
- Q.No.24) What is the maximum frame size supported by the Ethernet?
  - A. 64 Bytes
  - B. 600 Bytes
  - C. 1518 Bytes
  - D. 1024 Bytes
- Q.No.25) VPN stands for:
  - A. Virtual Protocol Network
  - B. Virtual Public Network
  - C. Virtual Private Network
  - D. None of the Above
- **Q.No.26)** What are the two types of access lists that can be configured on a Cisco router?
  - A. Standard and extended
  - B. Extended and filtering
  - C. Filtering and standard
  - D. Packet and filtering

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**Q.No.27)** Identify the purpose of the following command 'ip route 192.168.100.0 255.255.255.0 10.1.0.1

- A. Enabling a dynamic routing protocol
- B. Assigning the IP address 192.168.100.0 to an interface
- C. Teaches the router about the distant network 192.168.100.0 and how it can be reached via 10.1.0.1
- D. None of these

Q.No.28) What does the 'S' mean when looking at the routing table?

- A. Shutdown route
- B. Directly connected
- C. Dynamically attached
- D. Statically connected

Q.No.29) Which of the following is NOT a part of the IP header?

- A. Fragment offset
- B. Window size
- C. Header checksum
- D. Time to live

**Q.No.30)** Correctly match the "Layer Name" with the "Name of the unit exchanged" at that Layer.

- A) Physical layer
- i) Packet
- B) Data link layer
- ii) TPDU
- C) Network Layer
- iii) Bit
- D) Transport Layer
- iv) Frame
- A. A- iii, B- i, C-ii, D-iv
- B. A- iii, B- iv, C- ii, D- i
- C. A-iv, B-iii, C-ii, D-I
- D. A iii, B iv, C i, D ii

Q.No.31) Which of the following describes a MAC (Media Access Control) address?

- A. Used to identify systems of a LAN and the Internet
- B. Hardware address used by the Ethernet to deliver frames on a LAN
- C. Used when referring to a remote system
- D. Is typically assigned by the network in order to deliver IP datagrams to the proper system

**Q.No.32)** Assume you are the Network administrator maintaining the systems/networks for your organization. Now you want to remove an old machine and attach a new machine to the existing LAN that has a NIC card inside. Which among the following you will have to do in order to attach the machine to the network.

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- A. You have to provide the new machine with the logical and physical addresses
- B. No need to provide any address to the machine
- C. You have to provide the new machine with the physical address only
- D. You have to provide the new machine with the logical address only
- Q.No.33) If the data can travel in either direction, but not simultaneously is called
  - A. half-duplex communication
  - B. full-duplex communication
  - C. base band communication
  - D. broad band communication
- Q.No.34) You are responsible for setting up a LAN, for which you have decided to go for a 10/100 Ethernet. For your structured cabling which among the following would you use to connect the individual PCs to the switch with a constraint of keeping the expenditure to the minimum.
  - A. Coax 50 ohms
  - B. Single Mode fibre
  - C. Multi mode fibre
  - D. UTP
- Q.No.35) TCP and IP protocols provides
  - A. Connection less and connection less service
  - B. Connection oriented and connection oriented service
  - C. Connection oriented and connection less service
  - D. Connection less and connection oriented service
- **Q.No.36)** Match the following:
  - 1. Data Link Layer -

  - 2. Transport Layer 3. Presentation Layer 3. Presentation Layer
  - control
    - 4. Session Layer
  - A. 1-b, 2-c, 3-d, 4-a
  - B. 1-d, 2-c, 3-b, 4-a
  - C. 1-c, 2-d, 3-a, 4-b
  - D. 1-c, 2-d, 3-b, 4-a

- a. Dialogue control and Synchronization
- b. Translation, Encryption and Compression
  - c. Framing, Flow control and Error
- d. Flow control and Error control

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**Q.No.37)** Assume a tcp concurrent server A running at host with ip address 202.62.226.35 and port address 5672. Now if we have 4 tcp clients running on the host with ip address 202.62.226.36 and they have established connection with the server A. In this case

- A. The association maintained by the server with the client will differ only by protocol
- B. The association maintained by the server with the client will differ only by ip addresses of the client.
- C. The association maintained by the server with the client will differ only by port addresses of the client.
- D. The association maintained by the server with the client will differ only by ip and port addresses of the client.

**Q.No.38)** A packet with a special code in the address field is transmitted which is received and processed by all the machines in that network. Such an operation is called as

- A. Multicasting
- B. Broadcasting
- C. Unicasting
- D. None of the above

Q.No.39) The length of an IP v 6 Address is \_\_\_

- A. 32
- B. 48
- C. 64
- D. 128

**Q.No.40)** Which protocol does the ping command use when attempting to test whether a remote host is running?

- A. ICMP
- B. TCP
- C. UDP
- D. ARP