003-007204

M.C.A. (Sem.-II) (CBCS) Examination
May-2014
Paper : CA2004 – Computer Network

Faculty Code : 003
Subject Code : 007204

Time : 2½ Hours]   [Total Marks : 70

1. Attempt the following multiple choice question :   15

   (1) Frames from one LAN can be transmitted to another LAN via the device

   (1) router   (2) bridge

   (3) repeater   (4) None of these

   (2) Which of the following is the default subnet mask for a class C network

   (1) 127.0.0.0   (2) 255.255.255.0

   (3) 255.255.0.0   (4) None of these

   (3) Which of the following is a loop back address ?

   (1) 127.0.0.1   (2) 255.255.255.0

   (3) 255.255.0.0   (4) None of these

   (4) Which of the following is used for modulation and demodulation ?

   (1) Gateway   (2) Modem

   (3) Protocols   (4) None of these

   (5) Which of the following is not the disadvantage of wireless LAN ?

   (1) Slower data transmission

   (2) Higher error rate

   (3) Interface of transmission from different computers

   (4) All of the above

(6) MAN refers to

    (1) Mega Area Network

    (2) Metropolitan Area Network

    (3) Mini Area Network

    (4) None of these

(7) Which of the following layer is not in OSI model ?

    (1) Physical layer   (2) Internet layer

    (3) Network layer   (4) None of these

(8) Copper wire is an example of

    (1) guided transmission media

    (2) group media

    (3) unguided transmission media

    (4) None of these

(9) ATM is fundamentally a technology

    (1) circuit switching   (2) packet switching

    (3) narrow switching   (4) None of these

(10) HTTP refers

    (1) hyper text transfer protocol

    (2) hyper text transmission protocol

    (3) hyper text tile protocol

    (4) None of these

(11) What is the use of bridge in network ?

    (1) To connect LAN

    (2) To separate LAN

    (3) To control the speed of network

    (4) None of these

(12) Routers operates on which layer of OSI reference model

    (1) Physical layer   (2) Network layer

    (3) Application layer   (4) None of these

(13) What is the meaning of bandwidth in network ?

    (1) Transmission capacity of a communication channel

    (2) Connected computers in network

    (3) Class of IP used in network

    (4) None of these

(14) IP v6 occupies _____ bytes

    (1) 32   (2) 64

    (3) 128   (4) None of these

(15) TDMA means

    (1) Time division multiplier assignment

    (2) Time division multiple access

    (3) Time divider multiplier accomplier

    (4) None of these

2.   Attempt any **five** of the following :   **15**

    (1) What is port ? Explain in brief.

    (2) What is socket ? Explain in brief.

    (3) Briefly explain TDMA.

    (4) Briefly explain circuit switching network.

    (5) Write short note on star topology.

    (6) Write short note on routers.

3.   Attempt any **three** of the following :   **15**

    (1) Explain IPV4 in detail.

    (2) Write short note on message switching.

    (3) Write short note on IP datagram

    (4) What is TDM ? Explain in brief.

4. Attempt any **two** of the following : 10

   (1) Explain IP address structure in detail.

   (2) What is topology ? Explain ring topology with suitable example.

   (3) What is connectivity device ? Explain distance vector routing and link state routing in brief.

5. Attempt any of the following : 15

   (1) Describe OSI model in detail.

   (2) List the different cable media for transmission. Explain each in brief.

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1. Answer the following multiple choice questions :   **15**

    (1) Protocol used to monitor & control network device operates at :

         (a) Application layer   (b) Transport layer

         (c) Network layer   (d) Data link layer

    (2) Synchronous transmission is defined as :

         (a) Communication where the receiver clock is arranged to be in exact synchronism with that of the receiver.

         (b) Communication where the receiver will operate satisfactorily, even if its clock frequency is appreciably different to that of the transmitter.

         (c) Communication where the receiver clock must be in approximate synchronism with that of the transmitter.

         (d) None of the above

    (3) In OSI network architecture, the routing is performed by

         (a) Network layer   (b) Data link layer

         (c) Transport layer   (d) Session layer

    (4) Which of the following is not a transmission medium ?

         (a) Telephone lines   (b) Coaxial cable

         (c) Modem   (d) Microwave system

(5) Which of the following is an advantage of using fiber optics for data transmission ?

    (a) Resistance to data theft.   (b) Fast data transmission rate.

    (c) Low noise level.   (d) All of the above

(6) The _____ is the physical path over which a message travels.

    (a) Protocol   (b) Medium

    (c) Signal   (d) All of the above

(7) Which topology requires a central controller or hub ?

    (a) Mesh   (b) Star

    (c) Bus   (d) Ring

(8) What can happen at a token ring station ?

    (a) Examination of destination address.

    (b) Regeneration of frame.

    (c) Passing of a frame to next station.

    (d) All of the above.

(9) As the data packet moves from upper to lower layers, headers are :

    (a) Added   (b) Removed

    (c) Rearranged   (d) Modified

(10) The physical layer is concerned with the movement of _____ over the physical medium.

    (a) Program   (b) Dialog

    (c) Protocol   (d) Bits

(11) Which is the major factor that makes coaxial cable less susceptible to noise than twisted-pair cable ?

    (a) Inner cable   (b) Diameter of cable

    (c) Outer conductor   (d) Insulating material

(12) Contention is

   (a)   one or more conductors that serve as a common connection for a related group of devices.

   (b)   a continuous frequency capable of being modulated or impressed with a second signal.

   (c)   the condition when two or more stations attempt to use the same channel at the same time.

   (d)   a collection of interconnected functional units that provides a data communications service among stations attached to the network.

(13) Which of the following TCP/IP protocol is used for transferring electronic mail messages from one machine to another ?

   (a)   FTP   (b)   SNMP

   (c)   SMTP   (d)   RPC

(14) Which of the following device is used to connect two systems, especially if the systems use different protocols ?

   (a)   Hub   (b)   Bridge

   (c)   Repeater   (d)   Gateway

(15) A device that links two homogeneous packet-broadcast local networks, is

   (a)   Gateway   (b)   Repeater

   (c)   Bridge   (d)   Hub

2.   Attempt any **five** of the following :   **15**

   (1)   Define : Peer-to-peer networking.

   (2)   Explain active hub and passive hub as connecting devices.

   (3)   What are duties of transport layer ?

   (4)   List out various services. Explain file transfer services.

   (5)   Differentiate : Unshielded Twisted Pair vs. Twisted Pair Cable.

   (6)   Explain in brief TDM.

3. Attempt any **three** of the following : 15

   (1) Explain collaborative and distributed computing.

   (2) List out different wireless media. Compare different wireless media.

   (3) Explain in brief TCP/IP and related protocols.

   (4) Explain following connecting devices :

       (i)   Router

       (ii) Gateway

4. Attempt any **two** of the following : 15

   (1) Explain token passing access method. Compare it with contention method.

   (2) Explain link state routing and distance vector routing.

   (3) Define : Transmission media. Explain Coaxial cable's characteristics, cost, installation requirement, bandwidth usage, attenuation and electromagnetic interference.

5. Attempt any **one** of the following : 10

   (1) Explain in detail ISO/OSI reference model with block diagram.

   (2) Explain in detail packet and message switching.

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M. C. A. (Sem. II) Examination

May/June - 2012

CCA 2004 - Compute Network

Faculty Code : 003
Subject Code : 007204

Time : **3** Hours]   [Total Marks : **70**

1   Answer the following multiple choice questions.   **15**

   (1) _____ layer decides physical pathway the data should take.
       (A) Application   (B) Network
       (C) Physical   (D) None of these

   (2) ISO stands for
       (A) Internatinoal Standard Organization
       (B) International Student Organization
       (C) Integrated Services Organization
       (D) None of these

   (3) 2mbps = _____ kB.
       (A) 200.14   (B) 250.14
       (C) 244.14   (D) 344.14

   (4) _____ allow LAN users to share computer programs and data.
       (A) Communication server (B) Print server
       (C) File server   (D) None

   (5) Which connector UTP uses ?
       (A) BNC   (B) RJ-11
       (C) RJ-45   (D) RJ-69

   (6) Digital bandwidth is expressed in
       (A) Bits per second   (B) Bits per minute
       (C) Bytes per second   (D) Bytes per minute

   (7) Which of the following architecture uses CSMA/CD access method ?
       (A) ARCnet   (B) Ethernet
       (C) Apple talk   (D) None

(8) What is the main function of the transport layer ?
   (A) Node-to-node delivery
   (B) Process-to-process delivery
   (C) Synchronization
   (D) Updating and maintenance of routing tables

(9) Data link layer devices are _____.
   (A) NIC   (B) Switch
   (C) (A) and (B) both   (D) All of above

(10) Which of the following is an applicaiton layer services ?
   (A) Remote log-in
   (B) File transfer and access
   (C) Mail service
   (D) All the above

(11) Which type of HUB does not amplify the signal ?
   (A) Active HUB   (B) Passive HUB
   (C) Inteligent HUB   (D) None

(12) Which of the followig connetivity devices typically work at the network layer of the OSI model ?
   (A) Routers   (B) Bridges
   (C) Repeaters   (D) Gateways

(13) Circuit switching establish the path which
   (A) Remain fixed from duration of connection
   (B) Disconnect with each session
   (C) Both
   (D) None of these

(14) These define the rules of communications on a network.
   (A) Trnasmission media   (B) Protocols
   (C) Connectivity devices   (D) Client

(15) Which of the following statements concerning peer-to-peer networks is FALSE ?
   (A) A peer-to-peer to network is the most common example of a locally controlled network
   (B) Peer-to-peer networks cost more than client/server networks and are more difficult to maintain
   (C) Each node on a peer-to-peer network can communicate directly with every other node on the network
   (D) Peer-to-peer networkds are the most common types of home network

2   Attempt any five of the following.   **15**

    (1)   What is the difference between the internet and an intranet ?

    (2)   What is MAC address ?

    (3)   What is throughput ?

    (4)   Explain bit rate.

    (5)   Make a list of the advantages and disadvantages of client-server networks.

    (6)   What is a file server ?

3   Attempt any three of the following.   **15**

    (1)   Write a note on coaxial cable.

    (2)   Differentiate mesh and star topolgy.

    (3)   Explain IP classes.

    (4)   What is difference between ARP and RARP ?

4   Attempt any two of the following.   **15**

    (1)   What is the function of network and data link layer of OSI model.

    (2)   Explain FTP and SMTP protocol.

    (3)   What is brouter ? Compare with router.

5   Attempt any one of the following.   **10**

    (1)   Differentiate hub, repeater and switch.

    (2)   Write a note on various topology.

M.C.A. (Sem. II) (CBCS) Examination
May/June – 2011
CCA-2004 : Computer Network
(New Course)

Faculty Code : 003
Subject Code : 007-204

Time : 3 Hours]   [Total Marks : 70

Q-1. Answer the Following Multiple Choice Questions :   [15]
1. In this type of computing servers only acts as facilitator
    A. Distributed computing
    B. Centralized computing
    C. Collaborative computing
    D. Terminal computing
2. DHCP stands for
    A. Direct Host Configuration Protocol
    B. Disconnected Host Configuration Protocol
    C. Dynamic Host Configuration Protocol
    D. Digital Host Configuration Protocol
3. 2mbps = --------- KB
    A. 200.14
    B. 250.14
    C. 244.14
    D. 344.14
4. Peak amplitude of a signal represents absolute value of its highest intensity that is
    A. Directly proportional to energy
    B. Inversely proportional to energy
    C. Inversely proportional to root of its energy
    D. Inversely proportional to square of its energy
5. The Ethernet standard is
    A. 802.16
    B. 802.14
    C. 802.11
    D. 802.3
6. Digital bandwidth is expressed in
    A. bits per second
    B. bits per minute
    C. bytes per second
    D. bytes per minute
7. The speed of light in vacuum is
    A. 8×10^{-18} m/s
    B. 8×10^{18} m/s
    C. 8×10^{3} m/s
    D. 3×10^{8} m/s

8. Radio is an example of_____
   A. Full duplex
   B. Half duplex
   C. Simplex
   D. None.
9. Data link layer devices are _____
   A. NIC
   B. Switch
   C. a and b both
   D. all of above
10. Routing is performed at _____.
    A. Transport Layer
    B. Network Layer
    C. Session Layer
    D. Physical Layer
11. Which type of HUB does not amplify the signal?
    A. Active HUB
    B. Passive HUB
    C. Intelligent HUB
    D. None
12. Gateway is used in_____ layer of OSI
    A. Network
    B. Data link
    C. All
    D. Physical
13. Circuit switching establish the path which
    A. Remain fixed from duration of connection
    B. Disconnect with each session
    C. Both
    D. None of these
14. Ring topology used_____ protocol
    A. Token ring
    B. CSMA/CD
    C. CSMA/CS
    D. TCP/IP
15. Twisting of cable in twisted pair reduces
    A. EMI
    B. Bandwidth
    C. Collision
    D. All of above

Q-2. Attempt any Five of the Following: [15]
   1. Explain Client/Server Networking
   2. What is WAN?
   3. What is bandwidth?
   4. Explain Bit Rate
   5. What is the use of NIC?
   6. What is topology?

Q-3. Attempt any Three of the Following: [15]
1. Write a note on Twisted-Pair Cable
2. Differentiate Ring and Bus topology
3. Explain port and socket
4. Differentiate Message Switching and Packet Switching

Q-4. Attempt any Two of the Following: [15]
1. What is the function of transport and network layer of OSI Model
2. Explain UDP and ARP protocol
3. Explain any three IEEE 802 committee standards

Q-5. Attempt any One of the Following: [10]
1. Differentiate Time Division Multiplexing(TDM) and Frequency Division Multiplexing (FDM)
2. Write a note on routing algorithms and its functions