BRAINWARE UNIVERSITY

Term End Examination 2021 - 22
Programme – Bachelor of Technology in Computer Science & Engineering
Course Name – Computer Networks
Course Code - PCC-CS602
(Semester VI)

Time allotted : 1 Hrs.25 Min.   **Full Marks : 70**

[The figure in the margin indicates full marks.]

Group-A
(Multiple Choice Type Question)   1 x 70=70

Choose the correct alternative from the following :

(1) If the number of nodes in a mesh topology is n, then the total number of links in the topology will be

a) N   b) n(n+1)/2
c) n2   d) n(n-1)/2

(2) The topology with highest reliability is

a) Bus   b) Mesh
c) Ring   d) Star

(3) You want to verify VLAN membership on a Cisco Catalyst 2950 switch. You want to display VLAN assignment and membership type for all switch ports, however you do not want to view any extra information. Which command best displays this information?

a) show vlan brief   b) display vtp brief
c) show vlan short   d) display vtp short

(4) A set of rules that governs data communication is called

a) Protocols   b) Standards
c) RFC   d) Aggrement

(5) Which layer of the OSI model is responsible for combining bits into bytes and bytes into frames?

a) Presentation   b) Data Link
c) Application   d) Transport

(6) The method of communication in which transmission takes place in both directions, but only one direction at a time is called

a) Simplex   b) Four wire circuit
c) Full duplex   d) Half duplex

(7) Which of the following is not a cause of LAN congestion?

a) Too many hosts in a broadcast domain   b) Adding switches for connectivity to the network
c) Broadcast storms   d) Low bandwidth

(8) A virtual local area network(VLAN) is configured by

a) Hardware   b) Software

c) Protocol Stack   d) None

(9) What is the maximum number of VLANs that can be configured on a switch?

a) 24   b) Switch-dependent

c) 8   d) 255

(10) OSI stands for

a) Open Systems Interconnection   b) Online Systems Interconnection

c) Online Systems Interconnection   d) Open Systems Internet

(11) Select the wrong data communication system component

a) Medium   b) Receiver

c) Protocol   d) Transits

(12) Select the correct cable that transport signals in the form of light :

a) Twisted-Pair cable   b) Fiber-optic cable

c) Co-Axial cable   d) Shielded Twisted Pair cable

(13) Error detection at the data link level is achieved by

a) Bit stuffing   b) Cyclic redundancy code

c) Hamming code   d) Equalization

(14) Ethernet frame consists of

a) MAC address   b) IP address

c) Both MAC and IP address   d) None

(15) To create a loop less technology, a bridge can use

a) Prim's algorithm   b) Spanning tree algorithm

c) Marshall's algorithm   d) None

(16) Which of the following allows devices on one network to communicate with devices on another network?

a) Multiplexer   b) Gateway

c) T-switch   d) Modem

(17) Which of the following contention mechanisms is used by Ethernet?

a)   Token passing   b)   CSMA/CD

c)   CSMA/CA   d)   Host polling

(18) In the operation of CSMA/CD, which host(s) have priority after the expiration of the backoff algorithm?

a) All hosts have equal priority   b) The two hosts that caused the collision will have equal priority

c) The host that sent the jam signal after the collision   d) The host with the highest MAC address

(19) Which sublayer of the data link layer performs data link functions that depend upon the type of medium?

a)   Logical link control sublayer   b)   Media access control sublayer

c)   Network interface control sublayer   d)   None

(20) To join the Internet, the computer has to be connected to a

a) Internet society   b) Internet service provider

c) Internet architecture board   d) ATM

(21) Hamming code is a

a) Congestion control method   b) Forward error detection method

c) Forward error correction method   d) Backward error correction method

(22) Parity checking is a

a)   Error controlling method   b)   Error correcting method

c)   Flow controlling method   d)   Error detecting method

(23) Efficiency of slotted ALOHA is

    a) Same as pure ALOHA   b) Double compared to pure ALOHA

    c) Triple compared to pure ALOHA   d) Half compared to pure ALOHA

(24) Vulnerable time in case of pure ALOHA is

    a) Same as transmission time   b) Twice of transmission time

    c) Half of transmission time   d) Independent of transmission time

(25) Modulo-2 division arithmetic used in

    a) Parity checking method   b) Checksum method

    c) CRC method   d) Orthogonal method

(26) Sender window size with n bit sequence number in case of Go-Back-N ARQ is

    a) n   b) 2n

    c) 2n + 1   d) 2n -1

(27) 10Base5 Ethernet implementation medium is

    a) 2 UTP   b) 2 Fiber

    c) Thick coax   d) Thin coax

(28) Network congestion occurs

    a) In case of traffic overloading   b) When a system terminates

    c) When connection between two nodes terminates   d) When next hop blocked

(29) Which of the following is not a function of a router?

    a) Packet Switching   b) Maintain access control lists

    c) Path selection   d) Maintaining a filter table

(30) What is the subnetwork address for a host with the IP address of 200.10.5.68/28?

    a) 200.10.5.56   b) 200.10.5.32

    c) 200.10.5.64   d) 200.10.5.0

(31) What is the subnetwork number of a host with an IP address of 172.16.66.0/21?

    a) 172.16.36.0   b) 172.16.48.0

    c) 172.16.64.0   d) 172.16.0.0

(32) Which of the following is a dynamic mapping method that finds a physical address, given a logical address?

    a) ARP   b) RARP

    c) BootP   d) IP

(33) When a host knows its physical address but not its IP address, it can use

    a) RARP   b) IGMP

    c) ARP   d) ICMP

(34) What does RIP version2 use to prevent routing loops?

    a) CIDR   b) Split horizon

    c) Classless masking   d) Authentication

(35) For a switch to forward frames out of its network segment, what command must be issued in global configuration mode?

    a) ip default-gateway   b) routing enabled

    c) router rip   d) router ip

(36) Which of the following class of IP addresses is utilized for multicasting?

    a) Class A   b) Class B

    c) Class C   d) Class D

(37) Which one of the following routing algorithm can be used for network layer design?

    a) Shortest path algorithm   b) Link state algorithm

    c) Distance vector algorithm   d) All of the mentioned

(38) What is the first octet range for a class A IP address?

a) 1-120　　　　　　　　　　　　　　　　b) 0-125

c) 0-127　　　　　　　　　　　　　　　　d) 1-125

(39) What does RIP version 2 use to prevent routing loops?

a) Split Horizon　　　　　　　　　　　　b) Authentication

c) Holddown timer　　　　　　　　　　　d) Both a and c

(40) Which of the following is private IP address?

a) 12.2.3.0　　　　　　　　　　　　　　b) 172.15.14.36

c) 168.172.19.39　　　　　　　　　　　d) 192.168.24.43

(41) You type debug ip rip on your router console and see that the 172.16.10.0 is being advertised to you with a metric of 16. What does that mean?

a) The route is 16 hops away　　　　　　　b) The route has a delay of 16 microseconds

c) The route is inaccessible　　　　　　　d) The route already covered 16 hops

(42) Which one of the following is a transport layer protocol used in networking?

a) TCP　　　　　　　　　　　　　　　　b) UDP

c) Both TCP and UDP　　　　　　　　　　d) FTP

(43) Which address to be consulted to deliver a message to the correct application program running on a host?

a) MAC　　　　　　　　　　　　　　　　b) Port

c) IP　　　　　　　　　　　　　　　　　d) Logical

(44) Which of the following commands sets the secret password on a router to Cisco?

a) enable secret password cisco　　　　　　b) enable password cisco

c) enable secret cisco　　　　　　　　　　d) enable pwd cisco

(45) Ranges of Well-known ports are

a) 1 to 80　　　　　　　　　　　　　　　b) 0 to 256

c) 1 to 512　　　　　　　　　　　　　　d) 0 to 1023

(46) The combination of IP address and port number is known as

a) MAC address　　　　　　　　　　　　b) Socket address

c) Network address　　　　　　　　　　　d) Host address

(47) 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

(48) When you ping the loopback address, a packet is sent where?

a) On the network　　　　　　　　　　　b) Down through the layers of the IP architecture and then up the layers again

c) Across the wire　　　　　　　　　　　d) On the medium

(49) Transport layer aggregates data from different applications into a single stream before passing it to which layer?

a) Transport layer　　　　　　　　　　　b) Physical layer

c) Network layer　　　　　　　　　　　　d) Application layer

(50) Which of the following is a transport layer protocol?

a) Internet control message protocol　　　　b) stream control transmission protocol

c) dynamic host configuration protocol　　　d) neighbor discovery protocol

(51) Two broad categories of congestion control are

a) Open-loop and Closed-loop　　　　　　b) Active loop and Passive loop

c) Open-control and Closed-control　　　　d)　　Active control and Passive control

(52) Prevent before congestion occurs related to which method?

a) Open-loop
b) Closed-loop
c) Active control
d) Passive control

(53) Retransmission of packets must not be done when

a) Packet is lost
b) Packet is corrupted
c) Packet is needed
d) Packet is error-free

(54) Discarding policy is mainly done by

a) Router
b) Receiver
c) Sender
d) Switch

(55) What is the header size range in TCP segment?

a) 0 to 40 bytes
b) 20 to 60 bytes
c) 20 to 80 bytes
d) 40 to 160 bytes

(56) The packet sent by a node to the source to inform it of congestion is called

a) Choke
b) Discard
c) Explicit
d) Backpressure

(57) Which of the following is an application program that uses the services of ICMP to test reachability of a host?

a) Trace
b) Call
c) Ping
d) lookup

(58) Which protocol reduces administrative overhead in a switched network by allowing the configuration of a new VLAN to be distributed to all the switches in a domain?

a) STP
b) VTP
c) DHCP
d) ISL

(59) Which protocol is used between E-Mail servers?

a) POP3
b) SMTP
c) FTP
d) SNMP

(60) Split-horizon states that no advertisements will be sent back through the interface on which they were received. What mechanism overrides that behavior?

a) Triggered updates
b) Poison reverse
c) Hold-down timers
d)   Nothing overrides split-horizon

(61) The transfer of data from a CPU to peripheral devices of a computer is achieved through

a) Modems
b) Computer ports
c) Buffer memory
d) None

(62) You want to implement a mechanism that automates the IP configuration, including IP address, subnet mask, default gateway, and DNS information. Which protocol will you use to accomplish this?

a) DHCP
b) SNMP
c) SMTP
d) ARP

(63) A piece of icon or image on a web page associated with another webpage is called

a) url
b) Plug-in
c) Hyperlink
d) None

(64) URL stands for

a) Uniform resource locator
b) Unique reference label
c) Unified resource locator
d) None

(65) What is autonegotiation?

a) A security algorithm
b) A routing algorithm
c) A procedure by which two connected devices choose common transmission parameters
d) None

(66) Electronic mail uses which Application layer protocol?

a) FTP

b) HTTP

c) SCTP

d) SMTP

(67) Which protocol is a signaling communication protocol used for controlling multimedia communication sessions?

a) resource reservation protocol

b) session maintenance protocol

c) session modelling protocol

d) session initiation protocol

(68) What is the default connection type used by HTTP?

a) P-persistent

b) Non-persistent

c) Token passing

d) Persistent

(69) The values GET, POST, HEAD etc are specified in which section of HTTP message?

a) Header line

b) Request line

c) Entity body

d) Status line

(70) Concealing a message itself by covering it with something else is known as

a) Cryptography

b) Steganography

c) Masquerading

d) Repudiation