# BRAINWARE UNIVERSITY

## ODD Semester Examinations 2021- 22

Programme – Bachelor of Computer Applications - 2018 [BCA]

Course Name – Computer Networks

Course Code – BCA301

(Semester III)

Time allotted : 1 Hour 25 Minutes                                                    Full Marks : 70

(Multiple choise type question)                                    70 x 1 = 70

*Choose the correct alternative from the following*

(I)  Different computers are connected to a LAN by a cable and –

A) Modem                                         B) NIC

C) special wires                                 D) telephone lines

(II)  A flow characteristic in which the delay varies for packets belonging to the same flow is called

A) choke point                                   B) jitter

C) throughput                                     D) noise

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

A) Multiplexer                                   B) Gateway

C) Switch                                         D) Modem

(IV)  Viruses belongs to which network issue

A) Performance                                   B) reliability

C) security                                      D) all of these

(V)  For Stop-and-Wait ARQ, for n data packets sent ………acknowledgements are needed.

A) n                                             B) 2n

C) n(n-1)                                         D) n-1

(VI)  AJAX stands for

A) asynchronous JavaScript and xml              B) advanced JSP and xml

C) asynchronous JSP and xml                     D) advanced JavaScript and xml

(VII)  Aloha (slotted or pure) used in wireless medium because ….

A) It is not always possible to detect collision apriori due to hidden node                                     B) It can detect collision faster than CSMA/CD

C) It detects hidden nodes before transmitting data              D) It clears the paths before any transmission.

(VIII)  What are the options that are true for channel access methods?

A) i and ii                                       B) i and iii

C) ii and iii                                     D) iii and iv

(IX)  Manchester code is a–

A) Non-return to zero code                        B) Polar code

C) Bipolar code                                   D) Non-return to zero code and bipolar code

(X)  Sender and receiver needs to dynamically adjust buffer allocations for

A) flow control                                   B) congestion control

C) reliability                                    D) connection establishment

(XI)  Cryptanalysis is used

A) to find some insecurity in a cryptographic scheme             B) to increase the speed

C) to encrypt the data                            D) All of them

(XII)  In an optical fiber, the inner core is ………….. the cladding

    A) denser than                                  B) less dense than

    C) the same density as                         D) another name for

(XIII)  What attack is used to make a computer resource unavailable?

    A) Denial of service                              B) Backdoors

    C) Buffer overflows                            D) Snooping

(XIV)  The Wi-Fi connection uses 2.4 gigahertz signal frequency, they use

    A) radio wave                                  B) microwave

    C) infrared                                  D) Bluetooth

(XV)  In asymmetric key cryptography, the private key is kept by

    A) sender                                    B) receiver

    C) sender and receiver                         D) public

(XVI)  What is the maximum number of hosts that can be attached to a Class A in the IPv4

    A) 2 16                                     B) 216 - 2

    C) 2 24                                     D) 224 -2

(XVII)  Electronic mail uses which Application layer protocol?

    A) SMTP                                  B) HTTP

    C) FTP                                      D) SHTTP

(XVIII)  In the ……. random-access method there is no collision

    A) ALOHA                                 B) CSMA / CD

    C) CSMA / CA                              D) Token passing

(XIX)  UDP is

    A) reliable and connection oriented                 B) unreliable and connection oriented

    C) unreliable and connectionless                  D) reliable and connectionless

(XX)  Routers function in which layer(s)?

    A) physical                                  B) data link

    C) network                                 D) all of these

(XXI)  ARP is a –

    A) TCP/IP protocol used to dynamically bind a high level IP     B) TCP/IP high level protocols for transferring files from one machine
    address to a low level physical hardware address             to another

    C) Protocol used to monitor computers              D) Protocol that handles error and control messages

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

    A) URL                                    B) hyperlink

    C) plugin                                  D) URI

(XXIII)  A station in a network forward incoming packets by placing them on its shortest output queue. What routing algorithm is being used?

    A) Distance vector routing                        B) Flooding

    C) Static routing                              D) Delta routing

(XXIV)  Which of these is NOT applicable for IP protocol?

    A) Connectionless                             B) Offer reliable service

    C) Offer unreliable service                     D) None of the mentioned

(XXV)  All the packets of a message follow the same channels of a path in

    A) packet switching                           B) circuit switching

    C) message switching                      D) virtual circuit

(XXVI)  In computer network nodes are

    A) the computer that originates the data           B) the computer that routes the data

    C) the computer that terminates the data         D) all of the mentioned

(XXVII)  Application layer offers _____ service.

    A) End to end                                B) Process to process

C) Host to Host                                         D) end to end and Process to process

(XXVIII)  What is the difference between MAC sublayer and LLC sublayer?

A) LLC multiplexes data from network layer and demultiplexes data to network layer, MAC layer provides mechanism to access the physical medium to receive and transmit data

B) LLC allows a network device to be uniquely identified in a LAN, MAC multiplexes data from network layer and demultiplexes data to network layer.

C) LLC is optional if error control is not required, MAC is optional if flow control is not required.

D) None of these

(XXIX)  A telephone network is an example of …………. network.

A) Packet-switched                                      B) Circuit-switched

C) Message-switched                                     D) None of these

(XXX)  IEEE 802.11 specifies

A) Ethernet                                             B) token ring

C) token bus                                            D) wireless

(XXXI)  A bridge has access to which address of a station on the same network?

A) physical                                             B) network

C) service access point                                 D) all of these

(XXXII)  IP address can be used to specify a broadcast and map to hardware broadcast if available. By conversion broadcast address has hosted with bits

A) all 0                                                B) all 1

C) alternate 0 and 1                                    D) alternate 1 and 0

(XXXIII)  The network layer provides …………… delivery.

A) host-to-host                                         B) port-to-port

C) process-to-process                                   D) hop-to-hop

(XXXIV)  Bridges/Switches function in which layer(s)?

A) physical                                             B) data link

C) network                                              D) Physical and data link

(XXXV)  Who originally design TCP/IP ?

A) Department of Defense                                B) Novell

C) Xerox                                                D) IBM

(XXXVI)  Find the channel capacity if the SNR of a telephone line with bandwidth of 3000 Hz is 1023?

A) 3 Kbps                                               B) 3 bps

C) 30 bps                                               D) 30 Kbps

(XXXVII)  When a protocol specifies that the address of the sender must occupy the first 4 bytes of a message, what is this issue?

A) syntax                                               B) semantics

C) timing                                               D) none of these

(XXXVIII)  What are the properties of switched ethernet?

A) Filter segments based on IP address                  B) High utilization of computer networks

C) Collision rate is very high                          D) None of these

(XXXIX)  Error detection at the data link layer is achieved by -

A) Bit stuffing                                         B) CRC

C) Hamming code                                         D) Equalization

(XL)  Ethernet LAN uses

A) RZ encoding                                          B) differential Manchester encoding

C) Manchester encoding                                  D) NRZ-I

(XLI)  TCP sequence number field is of _____ bits.

A) 8                                                    B) 16

C) 24                                                   D) 32

(XLII)  The 1-persistent CSMA / CD is a special case of the p-persistent approach with p =

A) 0.5                                                  B) 0.1

C) 1                                                        D) 100

(XLIII)  What is the Hamming distance between 11100110 and 10100011?

A) 2                                                        B) 3

C) 4                                                        D) 5

(XLIV)  In_____ routing, the destination address is a network address in the routing table.

A) Next-hop                                                 B) Network-specific

C) Host-specific                                            D) Default

(XLV)  If the maximum value of a signal is 31 and minimum value is -32, how many bits are used for coding?

A) 4                                                        B) 5

C) 6                                                        D) 8

(XLVI)  First address in a block is used as network address that represents the

A) Class Network                                            B) Entity

C) Organization                                             D) Codes

(XLVII)  Before data can be transmitted, they must be transformed into

A) low frequency sine wave                                  B) electromagnetic signals

C) aperiodic signals                                        D) None of these

(XLVIII)  A bridge has access to the ................ address of a station on the same network

A) physical (MAC)                                           B) network

C) service access point                                     D) all of these

(XLIX)  Consider the bandwidth as 50 Kbps, one way transit time=240 msec and the segment size is 1000 bit. Consider the event of a segment transmission and the corresponding ACK reception. Find the maximum number of segments that can be outstanding during this duration

A) 23                                                       B) 24

C) 25                                                       D) 26

(L)  Jacobson's algorithm is used to

A) solve silly window syndrome problem                      B) handle out of order data problem

C) calculate dynamic time out timer                         D) None of these

(LI)  The communication that supports data transmission in both directions simultaneously is called

A) simplex                                                  B) half-duplex

C) duplex                                                   D) multiplex

(LII)  What is true for bridged ethernet?

A) Collision is not at all possible in bridged ethernet     B) Bridged ethernet breaks the collision domain by separating LAN

C) Bridged network reduce the overall throughput as result of excess overhead         D) None of these

(LIII)  In the slow start phase in TCP congestion control, the congestion window is

A) linearly                                                 B) exponentially

C) logarithmically                                          D) None of these

(LIV)  HTTP uses port in transport layer

A) 80                                                       B) 443

C) 20                                                       D) 21

(LV)  The number of times a signal changes value per second is called the----rate.

A) Bit rate                                                 B) Baud rate

C) frequency rate                                           D) Bit interval

(LVI)  Physical to Logical addresses conversion done by which protocol(s)?

A) RARP                                                     B) BOOTP

C) DHCP                                                     D) all of these

(LVII)  Protection of data from a natural disaster such as a tornado belongs to which of

A) performance                                              B) reliability

C) security                                                 D) management

(LVIII)  In cryptography, the order of the letters in a message is rearranged by

A) transposition ciphers                                    B) substitution ciphers

C) both transposition ciphers and substitution ciphers      D) none of the mentioned

(LIX)  Which topology provide the most flexibility?

A) star                                                     B) bus

C) ring                                                     D) mesh

(LX)  Which of the following network architectures does not use the token passing access method?

A) IEEE 802.4                                               B) FDDI

C) IEEE 802.3                                               D) IEEE 802.5

(LXI)  SNMP is an application layer protocol which is used to

A) framing                                                 B) error control

C) flow control                                            D) encoding

(LXII)  In a network with 25 computers, which topology would require the most extensive cabling?

A) Star                                                    B) Bus

C) Ring                                                    D) Mesh

(LXIII)  Which type of firewall is used to prevent direct TCP connection between the hosts?

A) Proxy Server                                            B) Circuit-level gateways

C) Packet filters                                          D) Application-level gateways

(LXIV)  Gateways in OSI model can function all the way up to –

A) transport layer                                         B) session layer

C) presentation layer                                      D) application layer

(LXV)  URL stands for

A) unique reference label                                  B) uniform reference label

C) uniform resource locator                                D) unique resource locator

(LXVI)  An IPv6 address consists of ……………. bits.

A) 48                                                      B) 16

C) 32                                                      D) 128

(LXVII)  Class has the greatest number of hosts per given network address.

A) A                                                       B) B

C) C                                                       D) D

(LXVIII)  What is the bandwidth of a signal whose lower frequency is 20 KHz and upper frequency is 60 KHz?

A) 80 KHz                                                  B) 3 KHz

C) 1200 KHz                                                D) 40 KHz

(LXIX)  In Ethernet when Manchester encoding is used, the bit rate is

A) Half the baud rates                                     B) Twice the baud rate

C) Same as the baud rated                                  D) none of these

(LXX)  PPP provides the _____ layer in the TCP/IP suite.

A) data link                                               B) transport

C) application                                             D) network