BRAINWARE UNIVERSITY

ODD Semester Examinations 2021- 22

Programme – Bachelor of Computer Applications - 2017 [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) 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

(II) 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

(III) 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.

(IV) Viruses belongs to which network issue

A) Performance   B) reliability

C) security   D) all of these

(V) 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

(VI) 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

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

A) performance   B) reliability

C) security   D) management

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

A) physical   B) data link

C) network   D) all of these

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

A) 2   B) 3

C) 4   D) 5

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

A) 8   B) 16

C) 24   D) 32

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

A) sender   B) receiver

C) sender and receiver   D) public

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

A) A   B) B

C) C   D) D

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

A) linearly   B) exponentially

C) logarithmically   D) None of these

(XIV) 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

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

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

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

(XVI) 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

(XVII) 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

(XVIII) 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

(XIX) Who originally design TCP/IP ?

A) Department of Defense   B) Novell

C) Xerox   D) IBM

(XX) 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

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

A) 48   B) 16

C) 32   D) 128

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

A) Star   B) Bus

C) Ring   D) Mesh

(XXIII) The functionalities of presentation layer include

A) Data compression   B) Data encryption

C) Data description   D) All of these

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

A) data link   B) transport

C) application   D) network

(XXV) Electronic mail uses which Application layer protocol?

A) SMTP   B) HTTP

C) FTP   D) SHTTP

(XXVI) 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

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

A) Next-hop   B) Network-specific

C) Host-specific   D) Default

(XXVIII) 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

(XXIX) 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

(XXX) 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

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

A) Modem   B) NIC

C) special wires   D) telephone lines

(XXXII) 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

(XXXIII) 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

(XXXIV) 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

(XXXV) 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

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

A) RARP   B) BOOTP

C) DHCP   D) all of these

(XXXVIII) 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

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

A) n   B) 2n

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

(XL) 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

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

A) transport layer   B) session layer

C) presentation layer   D) application layer

(XLII) Ethernet LAN uses

A) RZ encoding   B) differential Manchester encoding

C) Manchester encoding   D) NRZ-I

(XLIII) IEEE 802.11 specifies

A) Ethernet   B) token ring

C) token bus   D) wireless

(XLIV) 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

(XLV) What is the maximum magnitude bit rate in a noiseless channel if signal level L=2 and bandwidth=BW is used?

A) Half of BW   B) Same as BW

C) Double of BW   D) None of these

(XLVI) 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

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

A) Connectionless   B) Offer reliable service

C) Offer unreliable service   D) None of the mentioned

(XLVIII) URL stands for

A) unique reference label   B) uniform reference label

C) uniform resource locator   D) unique resource locator

(XLIX) Protocols are

A) agreement on how communication components and DTEs   B) logical communication channels used for transferring data
are to communicate

C) physical communication channels used for transferring data D) None of these

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

A) Denial of service   B) Backdoors

C) Buffer overflows   D) Snooping

(LI) Identify the class of IP address 199.1.2.3.

A) A   B) B

C) C   D) D

(LII) 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

(LIII) 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

(LIV) 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

(LV) Application layer offers _____ service.

A) End to end   B) Process to process

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

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

A) flow control   B) congestion control

C) reliability   D) connection establishment

(LVII) Which layer provides the services to user?

A) Application layer   B) presentation layer

C) transport layer   D) physical layer

(LVIII) 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

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

A) simplex   B) half-duplex

C) duplex   D) multiplex

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

A) Multiplexer   B) Gateway

C) Switch   D) Modem

(LXI) What type of signal can be transmitted by Broadband?

A) Analog   B) Digital

C) Both Analog and Digital   D) None

(LXII) In the OSI model, as a data packet moves from the lower to the upper layers, headers are

A) added   B) removed

C) rearranged   D) none of these

(LXIII) 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

(LXIV) Which topology provide the most flexibility?

A) star   B) bus

C) ring   D) mesh

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

A) Bit stuffing   B) CRC

C) Hamming code   D) Equalization

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

A) ALOHA   B) CSMA / CD

C) CSMA / CA   D) Token passing

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

A) radio wave   B) microwave

C) infrared   D) Bluetooth

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

A) URL   B) hyperlink

C) plugin   D) URI

(LXIX) If congestion is detected, the AIMD algorithm

A) decreases sending rate additively   B) increases sending rate multiplicatively

C) decreases sending rate multiplicatively   D) increases sending rate additively

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

A) framing   B) error control

C) flow control   D) encoding