



# BRAINWARE UNIVERSITY

Term End Examination 2021 - 22  
 Programme – Master of Computer Applications  
 Course Name – Data Communication & Computer Networks  
 Course Code - MCA301  
 ( Semester III )

Time : 1 Hr.15 Min.

Full Marks : 60

[The figure in the margin indicates full marks.]

## Group-A

(Multiple Choice Type Question)

1 x 60=60

Choose the correct alternative from the following :

- (1) A multistation access unit is most often used in \_\_\_\_\_ LAN
 

a) a. An Ethernet	b) b. A Token Ring
c) c. An FDDI	d) d. (a) and (b)
- (2) A bridge has access to which address of a station on the same network?
 

a) a. physical	b) b. network
c) c. service access point	d) d. all of the above
- (3) Routers function in which layer(s)?
 

a) a. Physical	b) b. data link
c) c. network	d) d. all of these
- (4) The network layer concerns with
 

a) a. bits	b) b. frames
c) c. packets	d) d. None of these
- (5) In virtual circuit network each packet contains
 

a) a. full source and destination address	b) b. a short VC number
c) c. only source address	d) d. only destination address
- (6) The 4 byte IP address consists of
 

a) a. network address	b) b. host address
c) c. both network address & host address	d) d. None of these
- (7) Which one of the following routing algorithm can be used for network layer design?
 

a) a. shortest path algorithm	b) b. distance vector routing
c) c. link state routing	d) d. All of these

- (8) Which one of the following algorithm is not used for congestion control?  
 a) a. traffic aware routing  
 b) b. admission control  
 c) c. load shedding  
 d) d. None of these
- (9) A subset of a network that includes all the routers but contains no loops is called  
 a) a. spanning tree  
 b) b. spider structure  
 c) c. spider tree  
 d) d. None of these
- (10) Multidestination routing  
 a) a. is same as broadcast routing  
 b) b. contains the list of all destinations  
 c) c. data is not sent by packets  
 d) d. None of these
- (11) ICMP is primarily used for  
 a) a. error and diagnostic functions  
 b) b. addressing  
 c) c. forwarding  
 d) d. None of these
- (12) Which one of the following is not a function of network layer?  
 a) a. routing  
 b) b. inter-networking  
 c) c. congestion control  
 d) d. None of these
- (13) .RIP stands for \_\_\_\_\_  
 a) a. Reduced Information Protocol  
 b) b. Routing Internet Protocol  
 c) c. Routing Information Protocol  
 d) d. Reduced Internet Protocol
- (14) Packets will be transferred in how many types?  
 a) a. 5 types  
 b) b. 4 types  
 c) c. 3 types  
 d) d. 2 types
- (15) ICMP stands for \_\_\_\_\_  
 a) a. Internet Coordinate Message Protocol  
 b) b. Internet Control Message Protocol  
 c) c. Interconnect Control Message Protocol  
 d) d. Interconnect Coordinate Message Protocol
- (16) The network layer issues request to which layer?  
 a) a. Transport layer  
 b) b. Data layer  
 c) c. Application layer  
 d) d. Session layer
- (17) Network layer protocol exists in \_\_\_\_\_  
 a) a. Host  
 b) b. Switches  
 c) c. Packets  
 d) d. Bridges
- (18) The network layer is considered as the \_\_\_\_\_ of the network layer.  
 a) a. backbone  
 b) b. packets  
 c) c. bytes  
 d) d. bits
- (19) Which level is the network layer in the OSI model?  
 a) a. Third level  
 b) b. Fourth level  
 c) c. Second level  
 d) d. Fifth layer
- (20) The network layer provides \_\_\_\_\_ delivery.  
 a) a. host-to-host  
 b) b. port-to-port  
 c) c. process-to-process  
 d) d. hop-to-hop
- (21) IP address can be used to specify a broadcast and map to hardware broadcast if available  
 e. By conversion broadcast address has hosted with bits



- a) a. all 0  
c) c. alternate 0 and 1
- b) b. all 1  
d) d. alternate 1 and 0
- (22) A station in a network forward incoming packets by placing them on its shortest output queue. What routing algorithm is being used?
- a) a. Hot Potato routing  
c) c. Static routing
- b) b. Flooding  
d) d. Delta routing
- (23) Identify the class of IP address 199.1.2.3.
- a) a. A  
c) c. C
- b) b. B  
d) d. D
- (24) Class \_\_\_\_\_ has the greatest number of hosts per given network address.
- a) a. A  
c) c. C
- b) b. B  
d) d. D
- (25) In \_\_\_\_\_ routing, the destination address is a network address in the routing table.
- a) a. Next-hop  
c) c. Host-specific
- b) b. Network-specific  
d) d. Default
- (26) What is the hostid of the IP address 114.34.2.8
- a) a. 114.34  
c) c. 2.8
- b) b. 114.34.2  
d) d. 34.2.8
- (27) What part of 192.168.10.51 is the Network ID, assuming a default subnet mask?
- a) a. 192  
c) c. 0.0.0.5
- b) b. 192.168.10  
d) d. 51
- (28) How many bits of internet address is assigned to each host on a TCP/IP internet which is used in all communications with the host?
- a) a. 16 - bits  
c) c. 48 - bits
- b) b. 32 - bits  
d) d. 64 - bits
- (29) The \_\_\_\_\_ layer ensures end-to-end reliable data transmission.
- a) a. Network  
c) c. Data link
- b) b. Physical  
d) d. Transport
- (30) The \_\_\_\_\_ layer lies between the network layer and the session layer
- a) a. Physical  
c) c. Transport
- b) b. Data link  
d) d. application
- (31) The \_\_\_\_\_ layer is responsible for source-to-destination delivery of the entire message
- a) a. Physical  
c) c. Transport
- b) b. Data link  
d) d. Network
- (32) A \_\_\_\_\_ address identifies a process running on a computer
- a) a. Logical  
c) c. Network
- b) b. Physical  
d) d. Service-point
- (33) Segmentation and reassembly are functions of the \_\_\_\_\_ layer
- a) a. Physical  
c) c. Transport
- b) b. Data link  
d) d. Network
- (34) In a connection-oriented exchange the first phase is \_\_\_\_\_ between the transport layers of the source and destination

- a) a. Connection establishment  
c) c. Connection termination
- b) b. Exchange of data packets  
d) d. None of the above
- (35) In a connection-oriented exchange the last phase after all the data packets are transferred is
- a) a. Connection establishment  
c) c. Connection termination
- b) b. Flow control  
d) d. None of the above
- (36) The assignment of sequence numbers to packets of message is a function of the \_\_\_\_\_ layer
- a) a. Physical  
c) c. Transport
- b) b. Data link  
d) d. network
- (37) The reassembly of packets into the original message is a function of the \_\_\_\_\_ layer
- a) a. Physical  
c) c. Transport
- b) b. Data link  
d) d. Network
- (38) The division of a message into packets is a function of the \_\_\_\_\_ layer
- a) a. Physical  
c) c. Transport
- b) b. Data link  
d) d. Network
- (39) Which is not a application layer protocol?
- a) a. HTTP  
c) c. FTP
- b) b. SMTP  
d) d. TCP
- (40) The packet of information at the application layer is called \_\_\_\_\_
- a) a. Packet  
c) c. Segment
- b) b. Message  
d) d. Frame
- (41) Which one of the following is an architecture paradigms?
- a) a. Peer to peer  
c) c. HTTP
- b) b. Client-server  
d) d. Both Peer-to-Peer & Client-Server
- (42) Application developer has permission to decide the following on transport layer side
- a) a. Transport layer protocol  
c) c. Both Transport layer protocol and Maximum buffer size
- b) b. Maximum buffer size  
d) d. None of these
- (43) The default connection type used by HTTP is \_\_\_\_\_
- a) a. Persistent  
c) c. Can be either persistent or non-persistent depending on connection request
- b) b. Non-persistent  
d) d. None of these
- (44) The time taken by a packet to travel from client to server and then back to the client is called \_\_\_\_\_
- a) a. STT  
c) c. PTT
- b) b. RTT  
d) d. JTT
- (45) . In the process of fetching a web page from a server the HTTP request/response takes \_\_\_\_\_ RTTs.
- a) a. 2  
c) c. 4
- b) b. 1  
d) d. 3
- (46) The values GET, POST, HEAD etc are specified in \_\_\_\_\_ of HTTP message
- a) a. Request line  
b) b. Header line



- c) c. Status line  
d) d. Entity body
- (47) Which DNS client maps an address to a name or a name to an address especially when required by a host?
- a) a. Resolver  
b) b. Mapper  
c) c. Primary Server  
d) d. Secondary Server
- (48) Which of the following transport layer protocols is used to support electronic mail?
- a) a. SMTP  
b) b. IP  
c) c. TCP  
d) d. UDP
- (49) The \_\_\_\_\_ translates internet domain and host names to IP address.
- a) a. domain name system  
b) b. routing information protocol  
c) c. network time protocol  
d) d. internet relay chat
- (50) Which one of the following allows a user at one site to establish a connection to another site and then pass keystrokes from local host to remote host?
- a) a. HTTP  
b) b. FTP  
c) c. telnet  
d) d. none of the mentioned
- (51) Which one of the following protocols delivers/stores mail to the receiver server?
- a) a. simple mail transfer protocol  
b) b. post office protocol  
c) c. internet mail access protocol  
d) d. hypertext transfer protocol
- (52) Which is not an application layer protocol
- a) a. HTTP  
b) b. SMTP  
c) c. FTP  
d) d. TCP
- (53) Application layer offers \_\_\_\_\_ service:
- a) a. End to end  
b) b. Process to process  
c) c. Both of the mentioned  
d) d. None of the mentioned
- (54) To deliver a message to the correct application program running on a host, the \_\_\_\_\_ address must be consulted
- a) a. IP  
b) b. MAC  
c) c. PORT  
d) d. None of the mentioned
- (55) FTP uses \_\_\_\_\_ parallel TCP connections to transfer a file
- a) a. 1  
b) b. 2  
c) c. 3  
d) d. 4
- (56) SMTP uses the TCP port
- a) a. 22  
b) b. 23  
c) c. 24  
d) d. 25
- (57) Firewalls are often configured to block
- a) a. UDP traffic  
b) b. TCP traffic  
c) c. Both of the mentioned  
d) d. None of the mentioned
- (58) In cryptography, what is a cipher?
- a) a. algorithm for performing encryption and decryption  
b) b. encrypted message  
c) c. both (a) and (b)  
d) d. none of these
- (59) In asymmetric key cryptography, the private key is kept by
- a) a. sender  
b) b. receiver

c) c. sender and receiver

d) d. all the connected devices to the network

(60) Which one of the following algorithms is not used in asymmetric-key cryptography?

a) a. RSA algorithm

b) b. diffie-hellman algorithm

c) c. electronic code book algorithm

d) d. none of these