

Total No. of Questions : 5]

SEAT No. :

P-3343

[Total No. of Pages : 5

[6027]-15

M.C.A. (Management)
IT15 : NETWORK TECHNOLOGY
(2020 Pattern) (Semester - I)



Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates :

- 1) All questions are compulsory.
- 2) All questions carry equal marks.
- 3) Draw neat diagrams wherever necessary.

Q1) Multiple Choice Questions :

[10]

- i) _____ are used for short-range communications such as those between a PC and a peripheral device.
 - a) Radio waves
 - b) Microwaves
 - c) Infrared waves
 - d) Not in the list
- ii) A _____ topology is a combination of several different topologies
 - a) Tree
 - b) Hybrid
 - c) Duplex
 - d) Tertiary
- iii) Microwaves are _____.
 - a) omnidirectional
 - b) unidirectional
 - c) bidirectional
 - d) Not in the list
- iv) An IP packet is called a _____.
 - a) user datagram
 - b) segment
 - c) datagram
 - d) none of the mentioned
- v) E-mail is a service handled by the _____ layer.
 - a) session
 - b) presentation
 - c) application
 - d) data link

vi) In a peer-to-peer process, layer 4 on machine A communicates with layer _____ on machine B.

- a) 1
- b) 2
- c) 3
- d) 4

vii) _____ increases the likelihood of detecting burst errors.

- a) Simple parity check
- b) Two-dimensional parity check
- c) CRC
- d) Check-sum

viii) ARQ stands for _____.

- a) Automatic repeat quantization
- b) Automatic repeat request
- c) Automatic retransmission request
- d) Acknowledge repeat request

ix) If the data unit is 101000, the divisor 1001, what checksum to be appended?

- a) 111111000
- b) 10000
- c) 011
- d) 1111111011

x) _____ is default subnet mask for Class C address

- a) 255.0.255.255
- b) 255.255.255.0
- c) 0.255.255.255
- d) None of the Mentioned

xi) A RIP table entry consists of _____.

- a) destination network address
- b) the hop count to that destination
- c) IP address of the next router
- d) All of the mentioned

xii) If subnet id is 255.255.255.0 for class B address, then how many bits are reserved for subnetwork?

- a) 2 bits
- b) 8 bits
- c) 6 bits
- d) 0 bit

- xiii) In link state routing, each router receives information directly from _____.
- a) Every router on the network
 - b) Every router less than two units away
 - c) A table stored on the network hosts
 - d) Its nearest neighbors only
- xiv) Electronic mail uses which Application layer protocol?
- a) SMTP
 - b) HTTP
 - c) FTP
 - d) SIP
- xv) FTP is built on _____ architecture.
- a) Client-server
 - b) P2P
 - c) Data centric
 - d) Service oriented
- xvi) Caesar cipher is an example of
- a) Asymmetric key cryptography
 - b) Symmetric key cryptography
 - c) Both Asymmetric and Symmetric key cryptography
 - d) None of the mentioned
- xvii) RSA algorithm is an example of
- a) Public key encryption
 - b) Symmetric key cryptography
 - c) Both Asymmetric and Symmetric key cryptography
 - d) None of the mentioned
- xviii) Which of the following is not Passive attacks?
- a) Modification of message
 - b) Obtaining information
 - c) Release of message content
 - d) Eavesdropping
- xix) In statement "int count\=send(sockid,msg,msgLen,flags);", count is
- a) bits transmitted
 - b) bytes transmitted
 - c) data transmitted
 - d) None of the mentioned



xx) Server announces willingness to accept the connection using _____ command

- a) accept() b) read()
c) write() d) listen()

- a) The received Hamming code word is 101101010. Using odd parity locate and correct the bit in error.
b) Find the transmitted frame, if a series of 8-bit message blocks - 11100110 is to be transmitted across a data link using CRC for error detection. The generator polynomial 11001 is to be used.

[10]

OR

- a) Generate CRC code for the data word 1010001011 using the divisor 1101.
b) Detect and correct the single error in the received Hamming code word 1011001011 using even parity.

[10]

Q3) a) Explain IP address format for Class A, Class B, Class C, Class D
Determine the network address for following IP Addresses:

- i) 83.41.57.10
ii) 194.38.14.13
iii) 143.62.11.18

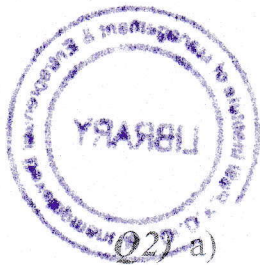
b) Explain IPv6 Packet Format in detail.

[10]

OR

- a) Find the maximum number of hosts available on a class-B address with a subnet mask of 255.255.255.192.
b) Find the subnet ID for the IP address 202.127.19.94 with a subnet mask of 255.255.255.248.

[10]



- Q4) a) Explain SMTP protocol in detail.
b) Explain OSPF routing protocol in detail.

[10]

OR

- a) Explain DHCP scope resolution protocol in detail.
b) Compare POP3 and IMAP email protocols.

[10]

- Q5) a) Explain socket programming in detail.
b) What are attacks? Write types of attacks in detail.

[10]

OR

- a) Write the client and server program for implementing the broadcasting in the local network.
b) Explain OSI model in brief.

[10]

