

September 2021

COMPUTER NETWORK (FOR IT)

Time Allowed: 1.5 Hours

Full Marks: 70

Answer to Question No.1 is compulsory and Answer any two questions from the rest.

1. Choose the correct answer from the given alternatives (any twenty): 20 x 2
- a) CRC stands for- i) Cyclic redundancy check ii) Cyclic redundancy code iii) Cyclic redundancy correction iv) none of the above
 - b) Parity bit are used for which of the following purpose- i) encryption of data ii) TO transmit faster iii) To detect errors iv) To identify the users.
 - c) What kind of transmission medium is most appropriate to carry data in computer network that is exposed to electrical interferences - i) unshielded twisted pair ii) optical fibre iii) coaxial cable iv) Microwave
 - d) Flow control is the responsibility of- i) Application layer ii) Physical Layer iii) Transport Layer iv) Presentation Layer
 - e) Which of the following transmission directions listed is not a legitimate channel?- i) Simplex ii) half duplex iii) Full duplex iv) Double duplex
 - f) A collection of hyperlink documents on the internet forms the- i) WWW ii) Email iii) Mailing List iv) HTML
 - g) The location of a resource on the internet is given by its- i) protocol ii) URL iii) Email Address iv) None
 - h) Which one of the following is the most common internet protocol?- i) TCP/IP ii) HTML iii) IPX/SPX iv) none
 - i) The term FTP stands for- i) File transfer program ii) File transmission protocol iii) File transfer protocol iv) File transfer protection
 - j) Which of the following is not a network topology?- i) Star ii) Ring iii) Bus iv) Peer-to-peer
 - k) The term WAN stands for i) Wide area net ii) Wide access network iii) Wide area network iv) Wide Access network
 - l) The term IPV4 stands for- i) Internet Protocol version 4 ii) Internet Programming version 4 iii) International Programming version 4 iv) none of these
 - m) The term LAN stands for- i) Local Access Network ii) Local Area Network iii) Local All Network iv) none of the above
 - n) In specific if the system use separate protocols, which one of the following devices is used to link two systems?- i) Repeater ii) Gateway iii) Bridge iv) Hub
 - o) In which of the following switching methods , the message is divided into small packets- i) message switching ii) Packet switching iii) Virtual switching iv) none of these
 - p) What is the name of the device that connects two computers by means of a telephone lines? i) tape ii) modem iii) bus iv) Cable

- q) What is the size of the sender window in the goback N (ARQ protocol)? i) 0 ii)1 iii) 10 iv) N
- r) During normal IP packet forwarding by a router which of the following fields of the IP header is updated?- i) Repeater ii) Source address iii) Destination address iv) checksum
- s) MAC address is also called-
i) Physical address ii) Logical address iii) Source address iv) Destination address
- t) Which of the following protocols is the connectionless protocol?
i) UDP ii) TCP iii) IP iv) all of these
- u) Which network is suitable for a building? i) WAN ii) LAN iii) MAN iv) PAN
- v) Which of the following device is not a networking device?-
i) hub ii) switch iii) Bridge iv) none of these
- w) How many pins does RJ 45 contain?- i) 8 ii) 4 iii)10 iv)2
- x) Computer Network is
i) Collection of hardware components and computers
ii) Interconnected by communication channels
iii) Sharing of resources and information
iv) All of the Above
- y) What is a Firewall in Computer Network?
i) The physical boundary of Network
ii) An operating System of Computer Network
iii) A system designed to prevent unauthorized access
iv) A web browsing Software
2. a) Describe different types of Transmission media with diagram.
b) Write short note about Cladding. 10+5
3. a) What is error detection? What is its method?
b) Suppose a sender wants to send a message 1001, at first encode (1001) to hamming code. After the change of hamming code 1001 to 1101 and find the error as well as correct changed bit. Solve the problem using Hamming code. <https://www.wbscteonline.com> 5+10
4. Write short note on FDM and TDM with figure. 7.5+7.5
5. a) What are the different types of error?
b) A bitstream 1101011011 is transmitted using the standard CRC method, the generator polynomial is $X^4 + X + 1$. What is the actual bitstream transmitted? 5+10
6. a) How many types of modes are used in data transferring through networks?
b) Define TELNET. 8+7
7. a) What is Digital Signature?
b) Differentiate between plain text and cipher text.
c) How does encryption work? 3+5+7
8. a) What are Public and Private Keys?
b) Write short note on DHCP and SMTP?
c) Differentiate between ARP and RARP. 3+6+6
9. a) What are the layers OSI reference model? Describe each layer briefly.
b) Why OSI is called open system? 8+7

10. a) What are the different topologies in computer network
b) Write short note on Router.

8+7

11. a) Differentiate between baseband and broadband.
b) Differentiate between TCP/IP and OSI model.

7.5+7.5

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