

END SEMESTER/RETEST EXAMINATION, 2020

SUBJECT : Data Communication and Networking

ET-602

Full Marks – 70

Time – Three Hours

Semester: 6th

Questions on part A are compulsory

Answer any three questions from part-B

PART – A

MARK-25

I. Choose the correct answer :

1x10 =10

(i) Working of the WAN generally involves –

- (a) Satellite
- (b) Telephone Lines
- (c) Microwaves
- (d) All of the above

(ii) Which of the following is used for modulation and demodulation?

- (a) Modem
- (b) Protocols
- (c) Gateway
- (d) Multiplexer

(iii) What is the other name of a LAN card?

- (a) Modem
- (b) NIC
- (c) Network Connector
- (d) Internet Card

(iv) In File Transfer Protocol, data transfer can be done in –

- (a) Stream Mode
- (b) Block Mode
- (c) Compressed Mode
- (d) All of the above

(v) In FTP protocol, Client contacts Server using _____ transport protocol

- (a) Datagram Congestion Control Protocol
- (b) Transmission Control Protocol
- (c) User Datagram Protocol
- (d) Stream control Transmission Protocol

(vi) Which of the following is not applicable for IP?

- (a) Error Reporting
- (b) Handle Addressing Conventions
- (c) Datagram Format
- (d) Packet Handling Conventions

(vii) What does the acronym ISDN stands for –



- (a) Indian Standard Digital Network
 - (b) Integrated Services Digital Network
 - (c) Intelligent Services Digital Network
 - (d) Integrated Services Data Network
- (viii) What is the minimum number of wires required for sending data over a Serial Communication Links?
 (a) 2 (b) 1 (c) 4 (d) 3
- (ix) What is the name of the Network Topology in which there are Bi-Directional links between each possible nodes?
 (a) Ring Topology (b) Star Topology (c) Tree Topology (d) Mesh Topology
- (x) The Communication mode that supports data in both directions –
 (a) Simplex Mode (b) Half Duplex Mode
 (c) Full Duplex Mode (d) Multiplex Mode

2. Fill up the blanks :

1x8=8

- (a) A communication network which is used by large organisations over Regional, National or Global Area is called _____.
- (b) _____ OSI Layer handles logical address to logical name resolution.
- (c) _____ operates in the Data Link and the Network Layer.
- (d) In OSI Network Architecture, the routing is performed by _____ layer.
- (e) Frames from one LAN can be transmitted to another LAN via _____.
- (f) A computer network permits sharing of _____.
- (g) ATM stands for _____.
- (h) The _____ is the Physical path over which a message travels.

3. State True or False :

1x7=7

- (a) Layer one of OSI model is Network Layer.
- (b) WAN stands for Wide Area Network.
- (c) Router Refers to a point or joint where a connection takes place.
- (d) The Physical Layer does the conversion from data bits to electrical signals.
- (e) Brouter is a device that acts as both a Bridge and a Router.
- (f) Bus topology requires a central controller or hub.
- (g) Communication between a computer and a keyboard involves Simplex transmission.

PART – B

MARK-45

Answer any three questions.

- 4. (a) Explain with examples the term Simplex, Half – Duplex and Full – Duplex. 7
- (b) State the differences between Analog and Digital transmission systems. 8



5. (a) Describe the Serial Packet Format in detail. 8
- (b) What are the different types of MODEMs ? Mention some application of MODEMs ? 7
6. (a) Describe different types of Network with neat diagrams ? 7
- (b) Explain with diagram about different types of Topology. 8
7. (a) What are Circuit Switching, Packet Switching and Message Switching ? 7
- (b) Discuss in detail about the OSI Model and also write the function of each layer. 8
8. (a) Discuss the working of Token Bus and token Ring standards of LAN. 7
- (b) Distinguish between Structured and Ad-Hoc networks. 8
9. **Write short notes on any two :** 2x7.5=15
- (a) Bit Rate, Baud Rate and Data Format (b) Point to Point Communication
- (c) Server, Client, Switch and Hub (d) Compare Bridge, Router and Gateway
- (e) World Wide Web

