Printed Page:- 04 **Subject Code**:- **ACSBS0602**

Roll. No:

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: VI - THEORY EXAMINATION (2022-2023 **)**

Subject: Computer Networks

Time: 3 Hours **Max. Marks: 100**

General Instructions:

IMP: *Verify that you have received the question paper with the correct course, code, branch etc.*

1. *This Question paper comprises of* **three Sections -A, B, & C.** *It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.*

2. *Maximum marks for each question are indicated on right -hand side of each question.*

3. *Illustrate your answers with neat sketches wherever necessary.*

4. *Assume suitable data if necessary.*

5. *Preferably, write the answers in sequential order.*

6. *No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.*

SECTION A **20**

1. Attempt all parts:-

1-a. Disadvantages of a Peer to Peer computer network are __. (CO1) 1

(a) Any one tamper data

(b) Less secure

(c) Difficult to maintain large data as any one can modify or delete

(d) All the above

1-b. A walkie-talkie operates in _____ (CO1) 1

(a) simplex

(b) half duplex

(c) full duplex

(d) semi-duplex

1-c. The synchronous Time-division Multiplexing (TDM) is not efficient because of (CO2) 1

(a) higher data rate

(b) infinite frames

(c) lower data rates

(d) empty slots

1-d. If link transmits 4000frames per second, and each slot has 8 bits, the transmission rate of circuit this TDM is _____ (CO2) 1

(a) 32kbps

(b) 500kbps

(c) 32bps

(d) 500bps

1-e. CRC uses_____ (CO3) 1

(a) Binary Multiplication

(b) Binary division

(c) Binary Addition

(d) Binary Subtraction

1-f. In CRC method at receiver side, if the result is all _____ then accepted. (CO3) 1

(a) Ones

(b) Zeros

(c) don't care

(d) None of these

1-g. A port address in TCP/IP is _____ bits long. (CO4) 1

(a) 32

(b) 48

(c) 16

(d) 8

1-h. Which of the following is a transport layer protocol? (CO4) 1

(a) DNS

(b) HTTP

(c) TCP

(d) ARP

1-i. In File Transfer Protocol, data transfer cannot be done in _____(CO5) 1

(a) stream mode

(b) block mode

(c) compressed mode

(d) message mode

1-j.	The frequency band of Bluetooth radio is around _____ (CO5) (a) 2.3 GHz (b) 2.1 GHz (c) 2.4 GHz (d) 2.2 GHz	1

2. Attempt all parts:-

2.a.	What is IEEE standards? (CO1)	2
2.b.	Draw the digram for multiplexing. (CO2)	2
2.c.	Define stop and wait protocol. (CO3)	2
2.d.	Define Congestion Control? (CO4)	2
2.e.	What is TELNET? (CO5)	2

SECTION B **30**

3. Answer any five of the following:-

3-a.	Explain Bus and Tree topology. (CO1)	6
3-b.	Explain OSI Model. (CO1)	6
3-c.	Define Go-back–N ARQ. (CO2)	6
3-d.	How the sliding window protcol is better ? Explain it using example? (CO2)	6
3.e.	Explain QoS improving techniques ?(CO3)	6
3.f.	Explain IPv6 addressing. (CO4)	6
3.g.	Basic concepts of Cryptography ? (CO5)	6

SECTION C **50**

4. Answer any one of the following:-

4-a.	Explain the need and goals of computer networks also discuss the practical example (CO1)	10
4-b.	Compare the guided and unguided media with examples. (CO1)	10

5. Answer any one of the following:-

5-a.	Write down the comparison between: - FDM and TDM (CO2)	10
5-b.	Explain concepts on spread spectrum with diagram. (CO2)	10

6. Answer any one of the following:-

6-a.	Explain two dimensional parity checking method. If the receiver receives the hamming code 1001001, perform the error detection. (CO3)	10
6-b.	Explain Parity checking and checksum method used for error detection with the	10

help of example. (CO3)

7. Answer any <u>one</u> of the following:-

7-a.	Write short notes on TCP and UDP. (CO4)	10
7-b.	Explain how an shortest path algorithm works also give suitable example. (CO4)	10

8. Answer any <u>one</u> of the following:-

8-a.	Explain DNS with reference to its components and working. (CO5)	10
8-b.	Explain the architecture and services of e-mailing system. (CO5)	10