

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular End Semester Examination – Summer 2022

Course: B. Tech. Branch : EXTC

Semester : VI

Subject Code & Name: BTETC602 COMPUTER NETWORK & CLOUD COMPUTING

Max Marks: 60 Date: 17/08/2022

Duration: 3.45 Hr.

Instructions to the Students:

1. All Questions are Compulsory
2. Draw neat diagram wherever necessary.
3. Figures to right indicates full marks
4. Assume suitable data wherever necessary and mention it clearly

	(Level/ CO)	Marks
Q. 1 Solve Any Two of the following.		
A) Explain the OSI reference model with neat diagram	1	06
B) I) Compare the Go-Back-N ARQ and Selective Repeat ARQ	2	03
II) Compare the HDLC and PPP.		03
C) Explain the following networking devices in short.	5	06
I. HUB		
II. Router		
III. Bridge		
Q.2 Solve Any Two of the following.		
A) An ISP is granted a block of addresses starting with 190.100.0.0/16 (65,536 addresses). The ISP needs to distribute these addresses to three groups of customers as follows: i. The first group has 64 customers; each needs 256 addresses. ii. The second group has 128 customers; each needs 128 addresses. iii. The third group has 128 customers; each needs 64 addresses. Design the sub-blocks and find out how many addresses are still available after these allocations.	7	06
B) I) A block of addresses is granted to a small organization. We know that one of the addresses is 205.16.37.39/28. i. What is the first address in the block? ii. Find the last address for the block iii. Find the number of addresses	7	04
II) Change the following IPv4 addresses from dotted-decimal notation to binary notation. i. 111.56.45.78 ii. 221.34.7.82		02
C) I. Describe in brief the types of classfull addressing II. Compare the TCP and UDP	3	03
		03
Q. 3 Solve Any Two of the following.		
A) The UDP header in hexadecimal format is as : CB84000D001C001C Obtain the following from it: i. Source port number ii. Destination port number iii. Total length iv. Length of the data. v. Name of client process	7	06
B) I) Compare the networking devices Router and Switch	2	02
II) Explain the different types of addressing used in computer network.		04

C) Write Short Note on following(Any 2):

I) WWW

II) EMAIL

III) Ethernet Frame Format

8

06

Q.4 Solve Any Two of the following.

A) Find the sub network address and the host-ID for the following

I. IP Address – 120.14.22.16 & Mask- 255.255.128.0

II. IP Address – 140.11.36.22 & Mask- 255.255.255.0

III. IP Address – 141.181.14.16 & Mask- 255.255.224.0

B) Explain any two protocols for noisy channel in DATA LINK LAYER

C) Define the following terms -

i) Repeater

ii) Ethernet

iii) Bluetooth

iv) Virtual LAN

v) Jitter

vi) Routing

7

06

2

06

6

1

1

1

1

1

1

1

Q. 5 Solve Any Two of the following.

A) Explain IPV4 Addressing and IPV6 Addressing. Also write difference between Classful and Classless Addressing

B) What is network topology? Explain the different network topologies.

C) I. Define Framing? And Explain in brief about different framing methods.

II. Define Computer Network?

4

06

1

06

2

04

02

*** End ***