

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
Q. 3 Solve Any Two of the following.		
A) The UDP header in hexadecimal format is as : CB8400D001C001C 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 II) Explain the different types of addressing used in computer network.	2	02
		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

7 06

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

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C) Define the following terms -

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- i) Repeater
- ii) Ethernet
- iii) Bluetooth
- iv) Virtual LAN
- v) Jitter
- vi) Routing

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Q. 5 Solve Any Two of the following.

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

4 06

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

1 06

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

2 04

II. Define Computer Network?

02

*** End ***