Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐

PRESIDENCY UNIVERSITY

BENGALURU

Make-up Examinations – December 2025

Date: 29- 12- 2025   **Time:** 01:00pm – 04:00pm

School: SOE	**Program:** B .Tech
Course Code: ECE3108	**Course Name**: DATA COMMUNICATION AND COMPUTER NETWORKS
Semester: MK	**Max Marks**:100 · **Weightage**:50%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	26	22	26	26	--

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.   **10Q x 2M=20M**

1	Define computer networks.	2 Marks	L1	CO1
2	List any two applications of computer networks.	2 Marks	L1	CO1
3	Name the two data transmission modes.	2 Marks	L1	CO1
4	Differentiate between Physical address and logical address.	2 Marks	L3	CO2
5	What are the classes defined in classful addressing.	2 Marks	L1	CO3
6	Define mask in classless IP addressing.	2 Marks	L1	CO3
7	Differentiate between UDP and TCP.	2 Marks	L1	CO3
8	Name any two protocols of transport layer.	2 Marks	L1	CO3
9	What is the function of DNS Protocol.	2 Marks	L1	CO4
10	What are the two DNS messages.	2 Marks	L1	CO4

Part B

Answer the Questions

Total 80 Marks.

11.	a.	Explain the functions of all the layers of OSI model with the help of relevant figure.	15Marks	L2	CO1
	b.	Map different addresses with its corresponding layers.	05Marks	L2	CO1

<div align="center">Or</div>

12.	a.	Describe and explain TCP/IP protocol suite with the help of a suitable diagram.	15Marks	L2	CO1
	b.	Compare OSI with TCP/IP model.	05Marks	L4	CO1

13.	a.	What are the two types of framing? Discuss bit oriented framing with the help of suitable example and highlight its advantages.	08Marks	L2	CO2
	b.	Explain CSMA protocols with the help of relevant figures.	12Marks	L2	CO2

<div align="center">Or</div>

14.	a.	Explain Stop and Wait -ARQ protocol using relevant diagram.	10Marks	L2	CO2
	b.	What are the three channelization multiplexing schemes. Discuss FDMA with the help of a diagram.	10Marks	L2	CO2

15.	a.	Explain Classfull IP architure in detail. i)Change the following IP addresses from dotted-decimal notation to binary notation. a. 114.34.2.8 b. 129.14.6.8	10 Marks	L2	CO3
	b.	ii). Change the following IP addresses from binary notation to dotted-decimal notation. a. 01111111 11110000 01100111 01111101 b. 10101111 11000000 11111000 00011101 iii) Find the class of the following IP addresses. a. 208.34.54.12	10 Marks	L3	CO3
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		b. 138.34.2.1			
		iv) Find the netid and the hostid of the following IP addresses.			
		a. 114.34.2.8			
		b. 132.56.8.6			

Or

16.	a.	Explain IPV6 datagram format with the help of labeled figure. What should be the content of Version field if it is IPV4 packet.	**10Marks**	**L3**	**CO3**
	b.	What are the three strategies for transiting from IPV4 to IPV6. Explain any two strategies.	**10Marks**	**L3**	**CO3**

17.	a.	Explain hierarchical structure of DNS in detail with the help of figure.	**10Marks**	**L2**	**CO4**
	b.	Discuss the working of iterative method of DNS server.	**10Marks**	**L3**	**CO4**

Or

18.	a.	Discuss in detail the primary and secondary DNS servers.	**10Marks**	**L2**	**CO4**
	b.	What is meant by DDNS. Explain the feature of the same.	**10Marks**	**L3**	**CO4**

***** BEST WISHES *****