PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING
MID TERM EXAMINATION - APR 2023

Semester : Semester IV - 2021

Course Code : CSE2011

Course Name : Sem IV - CSE2011 - Data Communication and Computer Networks

Program : CSE&ISR

Date : 12-APR-2023

Time : 9.30AM - 11.00AM

Max Marks : 50

Weightage : 25%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE QUESTIONS   **(5 X 2 = 10M)**

1. List the layers in TCP/IP model with name of packet at each layer

                                                        (CO1) [Knowledge]

2. Differentiate between persistent HTTP connection from non-persistent HTTP connection

                                                        (CO1) [Knowledge]

3. What is the relationship between sender window size, receiver window size and congestion window size, and explain its importance.

                                                        (CO1) [Knowledge]

4. List the functionalities of Data Plane and Control Plane?

                                                        (CO2) [Knowledge]

5. In IPv4, what is the value of the total length field in bytes if the header is 28 bytes and the data field is 400 bytes?

                                                        (CO2) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS **(4 X 5 = 20M)**

6. List the differences between OSI and TCP/IP Reference Model

(CO1) [Comprehension]

7. Explain HTTP request-response behavior with sample request and response message.

(CO1) [Comprehension]

8. TCP follows connection-oriented procedure which is also referred as three way handshake.Justify

(CO1) [Comprehension]

9. Identify the the network layer protocol , which provides unreliable, connectionless packet delivery for the Internet.
Illustrate IPV4 datagram with a neat diagram.

(CO2) [Comprehension]

PART C

ANSWER ALL THE QUESTIONS **(2 X 10 = 20M)**

10. Station A needs to send a msg consisting of 9 pkts to Station B
using sliding window(window size 3) and Go back N strategy.If every 5th packet that A transmits gets lost then what is the number of packets that A will transmit for sending the message to B

(CO1) [Application]

11. A host in Class C network has been assigned an IP address 192.168.17.9 Find the number of IP addresses, the first address and the last address

(CO2) [Application]