PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF INFORMATION SCIENCE
MID TERM EXAMINATION - OCT 2023

Semester : Semester III - 2022
Course Code : CSA2004
Course Name : Sem III - CSA2004 - Computer Networks
Program : BCA

Date : 30-OCT-2023
Time : 11:30AM - 1:00PM
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. Define PAN. List out the two types of PAN.

    (CO1) [Knowledge]

2. Define the following terms. a) Single bit error b) Burst error

    (CO1) [Knowledge]

3. What is bridge in data communication and networking?

    (CO1) [Knowledge]

4. Why do we use topology in networking?

    (CO2) [Knowledge]

5. Relate the Analog signal with the Digital signal.

    (CO2) [Knowledge]

PART B

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

6. Show how do the five essential components of data communication within networking collaboratively shape the digital realm, and what are their individual roles in this interconnected ecosystem?

    (CO1) [Comprehension]

7. Outline the various networking devices used to establish connections, and how do they shape the interconnected digital world?

    (CO1) [Comprehension]

8. Demonstrate how does Go-Back-N Automatic Repeat reQuest (ARQ) enhance data communication reliability and what are its key operational principles?

(CO2) [Comprehension]

9. Illustrate how do the various transmission modes in information transfer offer distinct benefits and drawbacks, shaping the way data is communicated in our interconnected world?

(CO2) [Comprehension]

PART C

ANSWER THE FOLLOWING QUESTION   (1 X 20 = 20M)

10. a. Outline how does the OSI Model orchestrate the symphony of network communication, with each of its layers playing a unique role in defining the functions, protocols, and services that harmonize the digital world? (15 marks)

    b. Determine the attenuation and amplification of a signal if it passes through a transmission medium with its power lowered to half and enhanced by 10 times, respectively. (5 marks)

(CO1) [Application]