

Roll No



**PRESIDENCY UNIVERSITY
BENGALURU**

**SCHOOL OF INFORMATION SCIENCE
END TERM EXAMINATION - JAN 2023**

Semester : Semester III - 2021

Course Code : CSA2004

Course Name : Sem III - CSA2004 - Computer Networks

Program : BCA - (All Programs)

Date : 6-JAN-2023

Time : 9.30AM - 12.30PM

Max Marks : 100

Weightage : 50%

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.

PART A

ANSWER ALL THE FOLLOWING QUESTIONS

10 X 2 = 20M

1. Write the methods of data communication in Mesh Topology.
(CO1) [Knowledge]
2. List the uses of Open Shortest Path First(OSPF).
(CO2) [Knowledge]
3. Is collision identified in ethernet? Explain.
(CO3) [Knowledge]
4. Write the contents of ARP table.
(CO3) [Knowledge]
5. Draw the frame format of IEEE 802.11.
(CO3) [Knowledge]
6. Compare 3G and 5G.
(CO3) [Knowledge]
7. Define Confidentiality.
(CO4) [Knowledge]
8. Give an example of a substitution cipher.
(CO4) [Knowledge]
9. Define IP Spoofing?
(CO4) [Knowledge]
10. Define Intrusion Detection System.
(CO4) [Knowledge]

PART B

ANSWER ALL THE FOLLOWING QUESTIONS

5 X 10 = 50M

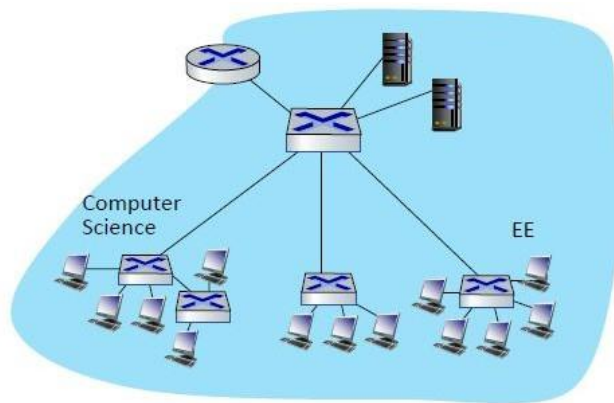
11. Consider you are searching in google about "best university in Bengaluru".
a) How the data transmission will happen in your browser to web servers? (3M)
b) What are the protocols supported for this operation? (4M)
c) Is this safe browsing? Justify your answer. (3M)

(CO1) [Comprehension]

12. Do you think Inter-AS(Autonomous Systems) communication needs a special protocol? (3M)
If so, what is the protocol? (3M)
Explain the message exchange of that protocol. (4M)

(CO2) [Comprehension]

13. Consider the following diagram.



If a PC from 'Computer Science' moves to EE physically. How to configure the switch? Explain the mechanism with an example.

(CO3) [Comprehension]

14. Suppose the PC1 sends the following data to PC2. Identify the ODD and Even Parities, and explain if there is any error packet in PC2, how it will identify?
Segment A: 11100011
Segment B: 10101010
Segment C: 11001101
Segment D: 10000100

(CO3) [Comprehension]

15. Do you think firewalls are protectors? (3M)
How "presidency university" will be protected with a firewall? (3M)
Explain with an example. (4M)

(CO4) [Comprehension]

PART C

ANSWER ALL THE FOLLOWING QUESTIONS

2 X 15 = 30M

- 16.** Consider the following data transmission.
Host A (Transmitted) 10101011-01101101-10101011-00101110-10101101
Host B (Received) 10101011-01111101-10101011-00111110-10101101
- a. Is the data transmitted without error? **(2M)**
 - b. How will you identify the bit-level errors? **(6M)**
 - c. Apply the checksum method to Host A and send the data. **(4M)**
 - d. Check the checksum data is correct in Host B. **(3M)**
- (CO3) [Application]
- 17.** A blog is a web- based publication of personal opinions, thoughts, and experiences. It's like a personal diary entry about a peThe contents of a blog are organized in reverse chronological order, which means that the most recent post Ms. Janu is new to the blog. She posted selfie pics and other personal documents unknowingly.
In the year 2022, how our data be secured in the public domain? explain the existing securitymethods. **(5M)**
List the possible threats to Janu's data. **(5M)**
Provide her strong solutions that how Janu can away from the network threats. **(5M)**

(CO4) [Application]