**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU -27**

**B.Sc. – VI SEMESTER**

**END SEMESTER EXAMINATION: APRIL 2023**

**(Examination conducted in May 2023)**

**CS6118 - COMPUTER NETWORKS**

**Time: 2 1/2 Hours Max Marks: 70**

**This paper contains one printed page and three parts**

**PART-A**

 **ANSWER ALL THE FOLLOWING QUESTIONS (2\*10=20)**

1. What is computer networks? List out its components.
2. Distinguish between any two transmissions modes.
3. Define Internet Checksum.
4. Differentiate between TDM and FDM.
5. Find odd and even parity for 11001100,0011010.
6. What do you mean by framing? Mention its types.
7. Illustrate the frame format for IEEE802.3 standard
8. Write a note on Stop & Wait Protocol.
9. What is Routing? What are the metrics to be considered to choose the best path?
10. Give a note on ARQ?

**PART B**

 **ANSWER ANY FIVE OF THE FOLLOWING QUESTIONS (6\*5=30)**

1. What is Topology? Illustrate Ring Topology with a neat diagram.
2. Illustrate the working of two-dimensional even parity check for the given data.

 101101, 101100, 111111, 001101

1. Summarize about switching. Differentiate Datagram and virtual circuit packet switching with a neat diagram.
2. Compare and contract characteristics features of twisted pair and Coaxial cable.
3. Explain in detail about slotted Aloha and CSMA with a neat diagram.
4. Summarize the concept of Distance Vector Routing with a neat diagram.
5. Write about Leaky Bucket congestion control algorithm in detail with a neat sketch.

**PART C**

 **ANSWER ANY TWO OF THE FOLLOWING QUESTIONS (10\*2=20)**

1. A) What is Multiplexing. Explain the usage in case study (4)

B) Explain in detail about FDM and TDM with a neat diagram (6)

1. A) Solve by using CRC method to the message 1101011011 where G(x)=10011 both at sender and receiver end (5)

B) Elaborate Go back n sliding window protocol. (5)

1. A) Discuss about Scheduling approaches to medium access control . (6)

B) Illustrate FDDI in detail. (4)