(d) Distinguish between connectionless and connection oriented services.

(e) What is computer network? Discuss the major applications of computer network.

(f) What do you mean by virtual circuit? Discuss permanent virtual circuit.

3. Attempt any **Two** of the following questions: **6 x 2 = 12**

(a) Draw the layered diagram of ISO-OSI Model? Explain the role of data link layer.

(b) What are protocols? Discuss the purpose of interface and services in OSI model.

(c) Describe network topology? Explain advantages of bus topology.

4. Attempt any **Two** of the following questions: **6 x 2 = 12**

(a) Draw and explain the TCP/IP suite. Differentiate between TCP/IP and OSI.

(b) Discuss Carrier Sense Multiple Access technique with persistence strategy.

(c) What do you mean by flow control? Discuss sliding Window Protocol.

5. Attempt any **Two** of the following questions: **6 x 2 = 12**

(a) Write short notes on any **Two** of the following:

Roll No. | | | | | | | | | | |

B.C.A.

FIFTH SEMESTER EXAMINATION, 2019-20

DATA COMMUNICATION & COMPUTER NETWORK

Time : **3 Hours** Max. Marks : **60**

Note : (i) Attempt **ALL** questions.
(ii) Choices are given in each question set.

1. Attempt any **Four** of the following questions: **3 x 4 = 12**

(a) What do you mean by Computer Communication? Discuss components of Computer Communication.

(b) What are fundamental characteristics on which the effectiveness of data communication depends?

(c) Differentiate between circuit switching, message switching and packet switching.

(d) Discuss various types of transmission modes in data communication.

(e) Compare between Analog Communication and Digital Communication.

(f) What is bit rate and baud rate? Describe with example.

2. Attempt any **Four** of the following questions: **3 x 4 = 12**

(a) What do you mean by modulation? Explain different types of modulation in brief.

(b) For the data 1011011 draw the following line code:

(i) RZ **(ii)** NRZ

(i) TELNET **(ii)** SMTP

(iii) DNS

(b) Describe traditional Ethernet with their frame format.

(c) What are transmission media? Discuss various types of transmission media in detail.

(iii) AMI

(c) What is Multiplexing? Differentiate between FDM, TDM.