COURSE CODE: CIT722

COURSE TITLE: COMPUTER NETWORKS

INSTRUCTION: *Answer any five questions out of Seven*
Time: 3HOURS

1

     a) Briefly describe the following network types:

        i. **Local Area Network**
       ii. **Metropolitan Area Network**
     iii. **Wide Area Network**

     b) Distinguish between **point-to-point** and **broadcast** networks.

2.

     a) Using sketches describe three different types of network **topologies**.

     b) Briefly describe the OSI Reference model listing all its layers in their proper order.

3.   a)Write a brief note on each of the following:

       i. Transmission Control Protocol (TCP)
      ii. User Datagram Protocol (UDP)

     b) Briefly explain what transmission medium is, listing three examples.

4.

     a) Explain clearly what is meant by multiplexing, describing two techniques used to implement it.

     b) Briefly explain what Media Access Control is describing two types of protocols used for it.

5.

     a) Distinguish between **adaptive** and **non-adaptive** routing algorithms.

     b) Write brief notes on each of the following routing algorithms:
       i. Shortest Path routing
      ii. Flooding

6.Briefly explain the function of a Domain Name System (DNS) in a TCP/IP Network.

     a) Write a brief note on each of the following:
       i. Switch
      ii. Bridge
     iii. Hub
     iv. Router

7.

     a) Briefly explain what an ATM Network is listing four of its benefits.

     b) Write a brief note on each of the following types of communication using examples to illustrate:
     i. Baseband
     ii. broadband