

2016

COMPUTER SCIENCE AND TECHNOLOGY

CSIT 2.1/406

**DATA COMMUNICATION AND
COMPUTER NETWORKS**

(Old/New Course)

Full Mark : 80

Time : 3 Hrs

Figures in the right hand margin indicate full marks for the question

1. Answer the following questions:
 - a. Difference between signal element and data element. 1
 - b. Difference between asynchronous and synchronous transmission modes. 1
 - c. Define DNS. 1
 - d. What is bandwidth? 1
 - e. What do you mean by WWW? 1
2. What are multiplexing and demultiplexing?
Explain WDM. 5
3. Discuss the performance and applications of Optical Fibre. 5
4. Discuss the datagram networks along with efficiency and delay. 6

5. Explain the categories of Standard Ethernet with diagram. 6
6. Mention the different types of transmission impairments. Discuss each of them. 7
7. How to change an analog signal to digital data? Draw the diagram of components of PCM encoder. Discuss the different sampling methods for PCM with diagrams. 7
8. What do you mean by digital-to-analog conversion? Classify digital-to-analog conversion and explain. 7
9. Discuss different layers of OSI Model. 8
10. Explain the reason for moving from the Stop-and-Wait ARQ Protocol to the Go-Back-N ARQ Protocol. 8
11. What is congestion? Explain the different methods used in congestion control. 8
12. Write short notes on (any two) 4x2=8
- a. HTTP
 - b. Email
 - c. DNS