

1st Internal Examination of MSc. (CS/IT) 2nd Semsester 2023

Paper: Data Communication and Computer Networks

Paper Code: CSC2016/INF2016

Full Marks: 25

Time: One and half hour

1. Answer the following questions- 1x5=5

i) Communication between a computer and a keyboard involves

_____ transmission.

- a) Automatic
- b) Half-duplex
- c) Full-duplex
- d) Simplex

ii) Bluetooth is an example of _____

- a) personal area network
- b) local area network
- c) virtual private network
- d) wide area network

iii) The physical layer is concerned with _____

- a) bit-by-bit delivery
- b) process to process delivery
- c) application to application delivery
- d) port to port delivery

iv) Wireless transmission of signals can be done via _____

- a) radio waves
- b) microwaves
- c) infrared
- d) all of the mentioned

v) Which of the following tasks is not done by data link layer?

- a) framing
- b) error control
- c) flow control
- d) channel coding

2. Answer the following questions-

- a) What is Computer Network? Mention the names of different types of computer networks. 1+1=2
- b) Define simplex, half duplex and duplex mode of communications. 3

3. Answer the following questions-

- a) Briefly explain about Bus topology, Star topology, Ring topology and Hybrid topology. 6

OR

Briefly explain about Co-axial cable, Fiber Optics cable, Radio wave and Micro wave.

- b) Convert the binary string 101110011 into signal using following encoding schemes (any two) 3

- i) NRZ-L
- ii) NRZ-I
- iii) Differential Manchester Encoding
- iv) Bipolar Encoding

- c) Briefly explain about any three framing methods with examples. 6