

**First Year B.C.A ( Semester - I ) Examination**  
**Paper - 15BCA105**

**Data Communication Network**

Time : Three hours]

[Full Marks - 60

- N.B. :**
- i) All questions carry equal marks
  - ii) Due credit will be given to neatness & adequate dimensions.
  - iii) Assume suitable data wherever necessary.
  - iv) Illustrate your answer necessary with the help of neat sketches.
  - v) Use Blue/Black ink/refill only for writing the answer book.

Q.1 Choose correct alternative and rewrite the following sentences. 5

- a) LAN stands for \_\_\_\_\_
  - i) Last Assembler Network
  - ii) Local Assembler Name
  - iii) Local Area Network
  - iv) Least Ask Notation
- b) The term \_\_\_\_\_ is a synonym for data transfer rate.
  - i) Bound rate
  - ii) Communication rate
  - iii) Circuit rate
  - iv) Bit rate
- c) TDM is an acronym for \_\_\_\_\_
  - i) Time Division Multiplexing
  - ii) Total Double Multiplexing
  - iii) Tube Detector Modulation
  - iv) Tripple Data Media
- d) \_\_\_\_\_ is the standard network protocol used for the transfer of computer files between client and server on computer network.
  - i) Voice Protocol
  - ii) PBX
  - iii) FTP
  - iv) All of these

- e) TCP/IP stands for \_\_\_\_\_
- Transfer common protocol/ Interpreter Protocol
  - Tranmission control protocol/ Internet protocol
  - Tools control phase/ Infrared prize
  - Team condition pole/ Inable d pipe

- Q.2 a) What is Computer network? Explain advantages & disadvantages of computer network. 6
- b) Explain :- 5
- Satellite
  - Infrared

OR

- Q.3 a) Explain with the example. 6
- LAN
  - WAN
  - MAN
- b) What is the role of Fiber optic cable in transmission media? Explain in detail. 5
- Q.4 a) Explain Communication System with its components. 6
- b) What is Topology? Explain ring topology in detail. 5

OR

- Q.5 a) Explain in details :- 6
- Half duplex
  - Full Duplex
- b) Write any five differences between digital signal and analog signal. 5
- Q.6 a) What is Modulation? Explain Amplitude and Frequency modulation. 6
- b) Define switching. Compare circuit switching with packet switching. 5

OR

- Q.7 a) What is Multiplexing? Explain Frequency Division Multiplexing (FDM) 5
- b) Explain in detail :- 6
- Phase Modulation
  - Multiplexer
- Q.8 a) What is Internet? Explain advantages of internet. 5
- b) Explain :- 6
- Router
  - Switches
  - Hub

OR

- Q.9 a) What is Modem? Explain types of modem. 5
- b) How e-mail and video conferencing are applications of internet? Explain in details. 6
- Q.10 a) Explain OSI model in detail with its different layers. 8
- b) What is token ring? Explain in short. 3

OR

- Q.11 a) Explain X.25 protocol and Datagram in detail. 6
- b) Explain :- 5
- ISDN
  - Fascimile (FAX)

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