

U.G. 3rd Semester Examination - 2020**BCA****Course Code : BBCACCHT301****Course Title : Computer Networks**

Full Marks : 40

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any **ten** questions: 1×10=10
- a) What do you mean by data communication?
 - b) Define Routing.
 - c) In which layer of Network Reference Models does X.25 protocol execute?
 - d) How many links are there in a fully connected mesh topology?
 - e) What is the full form of HDLC?
 - f) Write the relationship between Propagation Time and Propagation Speed.
 - g) What is parallel transmission?

- h) What is the special control frame used in IEEE802.4 LAN?
- i) Give one example of each byte-oriented protocol and bit-oriented protocol.
- j) Differentiate between analog and digital signals.
- k) Write down the example of an unguided transmission media.
- l) Which switching technique is also known as 'store and forward'?
- m) Define modem.
- n) Compute the Baud rate for a 72,000 bps 64-QAM signal.
- o) Write down the class of the IP 232.125.1.0.

2. Answer any **five**: 2×5=10
- a) Write the principle behind link state routing algorithm.
 - b) Difference between connectionless and connection oriented protocol.
 - c) Why 'Framing' is required in TDM link?
 - d) Difference between analogue and digital signal.

- e) Encode the given stream '101101000' by differential Manchester encoding scheme.
- f) Write the function of presentation layer in OSI model.
- g) How session layer synchronizes the interaction between the communicating systems?
- h) What do you mean by ring topology?

3. Answer any **two**: 5×2=10

- a) What are the modes of communication in HDLC protocol? Discuss. 4+1=5
- b) Write short notes on Bus Topology and Circuit Switching. 2½+2½=5
- c) Write a short note on Wired Transmission.

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4. Answer any **one**: 10×1=10

- a) Why packet switching is better than message switching? Describe any type of switching technique. 5+5=10
- b) i) Discuss any one type of X.25 communication channel.
- ii) Briefly describe the major entities associated with X.25.

- c) i) Write two similarities between OSI and TCP/IP model.
- ii) What do you mean by ICMP and IGMP?
- iii) Write function of Physical layer, Data link layer, and Session layer.

2+2+6=10
