

**BCA 5th Semester Exam., 2018**

**COMPUTER NETWORK, DATA  
COMMUNICATION AND CLIENT-  
SERVER TECHNOLOGY**

Time : 3 hours

**Full Marks : 60**

Instructions:

- i) The marks are indicated in the right-hand margin.
- ii) There are **SEVEN** questions in this paper.
- iii) Attempt **FIVE** questions in all.
- iv) Question Nos. **1 and 2** are compulsory.

1. Answer any six of the following :       $2 \times 6 = 12$

- (a) Write two advantages and disadvantages of network.
- (b) What is communication channel? Name the basic type of communication channel available.
- (c) Name some services provided by the physical layer in the OSI model.
- (d) What is meant by topology? Name some popular topologies.

- (e) What is the difference between half-duplex and full-duplex transmission modes?
- (f) Name the four layers in TCP/IP reference model.
- (g) What is the basic difference between repeater and bridge? Explain.
- (h) What is router?
- (i) What protocols fall under the application layer of the TCP/IP stack?
- (j) What is Ethernet?

2. Answer any three of the following :       $3 \times 6 = 18$

- (a) How do guided media differ from unguided media?
- (b) What are the major duties of data link layer in OSI model?
- (c) What is the purpose of the Hamming code?
- (d) What is sliding window protocol? Explain.
- (e) Explain in detail the type of networks.

*( Turn Over )*

3. What are the three types of redundancy checks used in data communication? 12
4. Compare and contrast the Go-Back-N ARQ protocol with selective-repeat ARQ. 12
5. What do you mean by a network? Describe the four basic network topologies and cite the advantages and disadvantages of each type. 12
6. What are the different connecting devices used in network? Explain. 12
7. Explain the different types of multiplexing technique used in networking. 12

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