

**315864**

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**CS-69**

**BACHELOR OF COMPUTER  
APPLICATIONS**

**BCA (PRE-REVISED)**

**Term-End Examination**

**December, 2019**

**CS-69 : TCP/IP PROGRAMMING**

*Time : 2 Hours*

*Maximum Marks : 60*

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*Note : Question No. 1 is compulsory. Answer any  
three questions from the rest.*

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1. (a) How is TELNET different from FTP ?  
Explain. 3
- (b) Explain the concept of iterative solutions  
in DNS with the help of a diagram. 3
- (c) Find the class and the network address of  
the following IP address : 4
  - (i) 135.10.70.56
  - (ii) 70.40.100.18

- (d) What are the major error control mechanisms in TCP ? How does TCP manage out-of-order segments ? Explain with the help of diagram. 5
- (e) What is the concept of a mask ? Explain, what are the default masks of IP address Classes : A, B, C ? 5
- (f) Discuss any *two* types of a socket. 4
- (g) What is the difference between `recv()` and `recv from()` system calls ? 3
- (h) Write steps for creating a connectionless client. 3
2. (a) Write and explain a client-server algorithm to establish a TCP connection between a client and a server. Once a connection is established, the client program sends a string to the server to count its length. The server program performs the task and returns the result to the client. 6

- (b) What is the need of RARP ? How does it work ? Explain with the help of a diagram. 4
3. (a) Describe the following fields of TCP header format : 6
- (i) Sequence Number
  - (ii) Acknowledgement Number
  - (iii) Urgent Pointer
- (b) Write the syntax and purpose of the following Unix commands : 4
- (i) IP Config
  - (ii) Ping
4. (a) How does TCP/IP model perform the function of session and presentation layers ? Explain. 3
- (b) What are primary and secondary DNS servers ? Explain. 2
- (c) Write all the steps for working of interactive and connection-oriented server. 5

5. (a) UDP (User Datagram Protocol) is a connectionless transport layer protocol. What do you mean by it ? 3
- (b) Differentiate between POP and IMAP protocols. 4
- (c) Explain the purpose of the following IP addresses : 3
- (i) 255.255.255.255
- (ii) 0.0.0.0