

**BACHELOR OF COMPUTER APPLICATIONS  
(BCA) (Pre-Revised)**

**Term-End Examination**

00803

December, 2018

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

*Time : 2 hours*

*Maximum Marks : 60*

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**Note :** *Question number 1 is compulsory. Answer any three questions from the rest.*

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1. (a) How do we deal with incompatibility issues at hardware and software level for setting up a Local Area Network (LAN) ? 5
- (b) What is a Subnet ID ? What is its purpose ?  
How do we calculate a Subnet ID ? 5
- (c) Given the IP address 132.6.15.80, find the network address. 2
- (d) How does the fragmentation offset field in IP header help in reassembly of the entire message ? 3
- (e) Draw and explain the process of connection termination in TCP. 5

- (f) Explain with an illustration, the sequence of system calls to be used in UDP and TCP client/server architecture design. 5
- (g) Why is HTTP called as stateless protocol ? Explain the different methods used in HTTP for request and response. 5
2. (a) Explain how subnetting and supernetting are used to enlarge a network. Give suitable example for each. 6
- (b) What is meant by binding in network programming ? Explain the three uses of bind system call. 4
3. (a) How are ARP and RARP similar and different from each other ? Explain the functioning of these two protocols. 6
- (b) What is the purpose of MIME protocol ? Explain. 4
4. (a) Explain the purpose and importance of the following IP and TCP header fields : 8
- (i) Time to live
- (ii) Sequence number
- (iii) Header checksum
- (iv) Window size

(b) Write the syntax and purpose of the following  
Unix commands : 2

(i) ipconfig

(ii) ping

5. (a) Explain the syntax and purpose of the  
following system calls along with the  
meaning of parameters used by them : 6

(i) socket()

(ii) accept()

(iii) sendto()

(b) Explain name-address resolution process in  
DNS. 4

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