

**BACHELOR OF COMPUTER
APPLICATIONS (BCA) (REVISED)**

Term-End Examination

June, 2019

**BCS-052 : NETWORK PROGRAMMING AND
ADMINISTRATION**

Time : 3 Hours

Maximum Marks : 100

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

1. (a) What is Virtual Private Network (VPN) ?
What are its advantages and disadvantages ? Also, write differences between
VPN and Free NX. 10

- (b) Explain the working of ARP. Write similarities and differences between ARP and RARP. 10
- (c) What is SMTP ? Explain the services offered by its components. 6
- (d) Draw and explain how does TCP handle the lost acknowledgement segment and the corrupted segment. 8
- (e) Explain the IP address classes. Also, indicate how many bits are used to represent the network ID and host ID part for these IP classes. 6
2. (a) Explain distance vector routing with the help of an example. 10

- (b) What is DHCP ? Explain the working of DHCP with the activities performed between DHCP client and DHCP server. 10
3. Write an algorithm each for TCP client and TCP server based on the following specifications : 20
- (i) TCP client will send a list of 10 numbers to the TCP server.
 - (ii) TCP server can handle maximum 4 client at a time. TCP server will find the smallest number from the given list and return to the respective client.
4. (a) Write the step by step procedure to configure a Samba server. Assume server IP address is 192.162.0.18 and server machine name is "BCA". 10

- (b) Write the differences and similarities between TCP/IP model and OSI reference models. 10

5. Write short notes on the following : 5 each

- (a) Network File System (NFS)
- (b) Network Monitoring Tools
- (c) Cloud Computing
- (d) DHCP