

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

Term-End Examination

June, 2018

00335

CS-69 : TCP/IP PROGRAMMING

Time : 2 hours

Maximum Marks : 60

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

1. (a) Find the class of the following IP addresses : 4
- (i) 120.40.10.15
- (ii) 225.35.70.40
- (b) Find the netid of the following IP addresses : 4
- (i) 120.35.20.80
- (ii) 150.70.80.50
- (c) What are the reserved bit patterns of the first bytes for class A and class B respectively ? 2

- (d) Suppose class B network uses 20 out of 30 bits to define a network. How many class B networks are possible ? 2
- (e) What is the use of flag bits in fragmentation process ? Explain. 4
- (f) How does DNS server work ? Explain. 5
- (g) How does FTP differ from other application layer protocols ? 5
- (h) What is a socket ? Write the difference between an active and a passive socket. 4
2. (a) Explain 3-way handshaking technique for connection establishment, with the help of a diagram. 5
- (b) How are the following ICMP messages used ? 5
- (i) Source query message
- (ii) Redirect routes
3. (a) What is the difference between 5
- (i) Connection oriented and Connectionless ?
- (ii) Stateful and Stateless ?
- (b) What is the difference between big-endian and little-endian data format ? 5

4. Explain the syntax of the following system calls along with their meaning and parameters used by them : 10
- (i) accept()
 - (ii) read()
 - (iii) sendto()
 - (iv) writer()
 - (v) close()
5. (a) Draw the TCP segment format. 2
- (b) Explain the importance of the following fields in TCP segment : 8
- (i) Sequence number
 - (ii) Padding
 - (iii) Window size
 - (iv) Header length
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