

BACHELOR OF COMPUTER APPLICATIONS

Term-End Examination

December, 2014

02644

BCS-061 : TCP/IP PROGRAMMING

Time : 2 hours

Maximum Marks : 60

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

1. (a) What is the purpose of ICMP ? What kind of network information does it carry ? Explain. 4
- (b) What is the purpose of port addresses ? Do port addresses at transport layer need to be unique ? Why or why not ? 4
- (c) Identify the address class of the following IP addresses : 4
 - (i) 14.6.12.1
 - (ii) 123.14.121.14
 - (iii) 197.125.1.1
 - (iv) 243.18.16.2
- (d) Which fields of the IP header change from router to router ? Assume fragmentation occurs. 4
- (e) Differentiate between POP and IMAP Protocols. 4

- (f) How is checksum in TCP header computed ? Give an example to explain it. 5
- (g) List the operations of 3-way handshake method. How is it different from 2-way handshake method ? 5
2. (a) How does FTP work ? Explain the connection establishment procedure between a client and a server. 5
- (b) Why and how is broadcasting used in ARP ? Compare it with RARP. 5
3. (a) Why is flow control handled at two different layers of TCP/IP model ? Also, give the names of these layers. 4
- (b) An IP datagram has arrived with the following information in the header (in HEX) (20 bytes) :

54 10 00 45 00 03 01 00 20 06 00
7C 3E 02 02 B3 0E 1F 04

- (i) Are there any options ?
- (ii) What is the identification number of the packet ?
- (iii) What is the size of the data ?
- (iv) Is the packet fragmented ?
- (v) How many more routers can the packet travel to ?
- (vi) Is a checksum used ? 6

4. Write an algorithm each for TCP client and TCP server with the following specifications : 10

- TCP client will initiate the communication and send “user name” to the server.
- TCP server has a list of users. It will accept maximum five clients at one time. TCP server accepts the “user name” from clients. As a reply it will send the server system time to the respective client.

Note : *Make suitable assumptions, if any.*

5. Write the syntax of the following system calls along with the meaning of parameters used by them : 10

- (a) `bind ()`
 - (b) `htons ()`
 - (c) `accept ()`
 - (d) `write ()`
 - (e) `sendto ()`
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BACHELOR OF COMPUTER APPLICATIONS
(Revised)

02094 **Term-End Examination**
December, 2014

BCS-062 : E-COMMERCE

Time : 2 hours

Maximum Marks : 50

Note : Question number 1 is compulsory and carries 20 marks. Attempt any three questions from the rest.

1. (a) Explain transplanted real world business models and native Internet business models. 10
- (b) What is meant by Online trading ? How is it performed ? What are its advantages and disadvantages ? 10
2. (a) Explain any 5 types of Electronic Payment Systems. 5
- (b) What is a Digital Signature ? How does it work ? 5
3. (a) Explain any two EDI standards. 5
- (b) Explain m-commerce application flow. 5

- 4. (a) Write a short note on Electronic Markets. 5**
- (b) Explain the main functionalities of an Online Shopping Portal. 5**
- 5. (a) Explain the roles of various stakeholders in the delivery of goods and services online. 5**
- (b) Write a short note on Cyber Laws. 5**
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