

B.TECH DEGREE EXAMINATIONS: MAY/JUNE 2013

Sixth Semester

INFORMATION TECHNOLOGY

ITY111: TCP / IP Socket Programming

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. In an internet, interconnections among networks are formed by computers called _____ that attach two or more networks.
 - a) IP routers
 - b) IP switches
 - c) IP hubs
 - d) IP address.
2. CIDR refers to _____.
 - a) Classless Intra-Domain routing
 - b) Classless Inter-Domain routing
 - c) Classless Inter-Domain reaches
 - d) Classless Intra-Domain reaches
3. Hosts communicate their group membership to multicast routers using _____ protocol.
 - a) TCP/IP
 - b) UDP
 - c) IGMP
 - d) DHCP
4. Which protocol is used to handle automated address assignment?
 - a) TCP
 - b) UDP
 - c) IGMP
 - d) DHCP
5. The two functions that convert IP address between presentation format and numeric format are _____, _____.
 - a) inet-pton, inet-ntop
 - b) inet-addr, inet-ntop
 - c) inet-addr, inet-pton
 - d) inet-pton, inet-aton
6. How many exec functions are there in elementary TCP sockets?
 - a) 4
 - b) 5
 - c) 6
 - d) 7
7. The most commonly used function for I/O multiplexing is _____.
 - a) bind
 - b) echo
 - c) shutdown
 - d) select

22. a) (i) Explain Karn's algorithm and timer Back off. (4)
(ii) Explain in detail how TCP uses a three-way handshake for establishing and closing a TCP connection. (10)

(OR)

- b) (i) Bring out the features of IPv6. (4)
(ii) Explain the Following: (10)
(1) IPv6 Fragmentation and Reassembly.
(2) IPv6 Base Header Format.

23. a) (i) Compare the five socket address structures. (7)
(ii) Describe with an example a Byte Ordering functions. (7)

(OR)

- b) Describe the elementary socket functions required to write a complete TCP Client and Server.

24. a) Describe the following with an example.
(i) TCP Echo Server. (7)
(ii) TCP Echo Client. (7)

(OR)

- b) What are five different models for I/O provided by UNIX? Explain each model in detail.

25. a) Discuss in detail the various Generic Socket Options.

(OR)

- b) (i) Describe the following functions that can be used with UDP sockets (4)
(1) recvfrom function (2) sendto function
(ii) Describe the functions used to convert between hostnames and IPv4 addresses (10)
with an example.
