

**TYBSCIT Semester – VI – INTERNET TECHNOLOGY Question paper**  
**APRIL-2015**

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- 1. Attempt any two of the following. 10**
- a. What are the functions of the transport layer in the OSI model?
  - b. In a block of addresses, we know the IP address of one host is 110.23.120.14/20. What are the first address (network address) and the last address (limited broadcast address) in this block.
  - c. How does the IPv4 protocol work over ATM networks?
  - d. Compare an IPv4 header with an IPv6 header.
- 2. Attempt any two of the following. 10**
- a. Explain the cache control module and the cache table in the ARP package.
  - b. State and explain the three phases that a mobile host goes through in order to communicate with a remote host.
  - c. Explain the source quench message and the time exceeded message in ICMP.
  - d. State and explain the solutions to the two node instability in RIP.
- 3. Attempt any two of the following. 10**
- a. Explain the send and the receive windows used in TCP for flow control.
  - b. Explain the server states of the TCP state transition.
  - c. Explain the services provided by UDP.
  - d. Explain the control flags, window size and urgent pointer fields in the TCP header.
- 4. Attempt any two of the following. 10**
- a. Explain the services offered by SCTP to the application layer processes.
  - b. Explain the DHCP client transitions with the help of a diagram.
  - c. Explain the association establishment in SCTP.
  - d. What are the two kinds of resolution used by DNS for name-address resolution?
- 5. Attempt any two of the following. 10**
- a. Explain the four control characters used in TELNET for option negotiation.
  - b. Explain the different kinds of TFTP messages.
  - c. Write a note on- HTTP?
  - d. Explain the three attributes of communication over data connection in FTP.

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**6. Attempt any two of the following. 10**

- a. Write a note on- MIME.
- b. Explain the commands and responses used in SMTP to transfer messages from the client to server.
- c. Explain the two techniques used for traffic shaping to improve Quality of Service.
- d. Explain the characteristics of real-time audio/video communication.

**7. Attempt any three of the following 15**

- a. What are the four levels of addresses used in the internet having TCP/IP protocols.
- b. State and explain the four types of links in OSPF.
- c. What are the different timers used in TCP?
- d. Differentiate between a TCP header and an SCTP header.
- e. Write a note on cookies used with HTTP.
- f. State and explain the different types of messages in BGP.

