MUMBAI UNIVERSITY

B.Sc.IT: Semester – VI

Question Paper

December – 2018

INTERNET TECHNOLOGIES

IDOL – REVISED COURSE

a) Explain the options in IPv4

b) List different types of BGP Messages and write the purpose of each.

c) Explain the concept of NVT and NVT Character Set.

d) Compare TCP with UDP.

a) Why do you need Subnetting in Classfull Addressing? Explain.

b) List functionalities of Transport Layer. Explain any four.

c) What is fragmentation? Which fields changes over datagram during fragmentation in routing? Explain.

d) Compare IPV4 with IPV6.

e) What are the special addresses used in IPv4?

f) How is the address space allocated for IPv6 Addresses?

Q. NO #3	**Attempt Any Three Questions:**
	(15 Marks)

a) Explain the Distance Vector Algorithm used in Routing Information Protocol.

b) Mobile IP communication can be Inefficient. Why? What is its Solution? Explain.

c) What is Address Resolution Protocol? What is its use? Explain the ARP Request and Reply Messages.

d) What is the use of Query Messages? Explain any one

e) List and explain the different types of links in OSPF.

f) What is link State Routing? Explain with suitable.

a) Explain with examples how checksum is calculate in UDP.

b) Explain Half Close in TCP Connection Termination.

c) What are the different timers in TCP? Explain each in detail.

d) Explain NUMBERING system use in TCP.

e) Draw TCP Segment Format. Write the purpose of each field.

f) What is the concept of 3-Way Handshaking in TCP Connection establishment?

a) Write a short note on DNS.

b) Draw and explain the DHCP Client Transition Diagram.

c) Explain SCTP association establishment and Termination.

d) Explain Recursive Resolution and Iterative Resolution used in Domain Name Service.

e) Explain the Character Mode and Line Mode of TELNET Operation.

f) List and explain the components of SSH.

a) Write the purpose of any four MIB Objects.

b) Explain the following email scenarios with the help of diagrams:

  i. *When the sender and the receiver of an e-mail are on different mail servers.*

  ii. *When sender is connected to the mail server via LAN or a WAN.*

c) Differentiate between POP3 and IMAP.

d) Write a short note on MIME.

e) Explain the four approaches to streaming stored audio/video.

f) Write a short note on URL.

a) Explain how UDP socket programming works?

b) Write a note on Server Socket.

c) Write a UDP Socket program which reads a string from client, calculate its length and sends it back to the client.

d) Write TCP Socket Program to find whether a number is odd or even.

e) Write a JAVA code for UDP Server application to check whether the number is divisible by 15 and 27.

f) Write UDP socket program that will display number of vowels in a string.

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