

T.Y. B.Sc. (IT) : Sem. VI
Internet Technologies
Prelim Question Paper



Time : 2½ Hrs.]

[Marks : 75

- Instruction :**
- (1) Each question carries 5 marks.
 - (2) Draw diagrams neatly using pencil.
 - (3) Questions should be answered in a proper sequence.
 - (4) Use of scientific calculator is allowed. Mobile phones are NOT allowed.

1. Attempt any **TWO** question of the following : [10]
 - (a) Find the errors and rewrite the following IPV4 addresses :
 - (i) 427.45.12.47
 - (ii) 40.040.35.7.8
 - (iii) A0.37.27.255
 - (iv) 27.01010101256.23
 - (v) 27.56.78.256
 - (b) Compare IPv4 with IPv6.
 - (c) Explain the concept of Network Address Translation.
 - (d) Draw a neat labeled diagram and explain IPv4 datagram header format.

2. Attempt any **TWO** question of the following : [10]
 - (a) Describe 3 phases of communication between remote host and mobiles host.
 - (b) Explain the cache control module and the cache table in the ARP package.
 - (c) How Bellman-Ford algorithm helps to find least cost between any two nodes? Explain.
 - (d) State and explain the solutions to the two node instability in RIP.

3. Attempt any **TWO** question of the following : [10]
 - (a) What are the options available in TCP? Explain each with its packet format.
 - (b) Explain Data Chunk in detail.
 - (c) Explain in detail UDP Package.
Find the netid of the following IP address :
 - (i) 114.34.2.8
 - (ii) 132.56.8.6
 - (d)
 - (iii) 208.34.54.12
 - (iv) 251.34.98.5
 - (v) 129.14.6.8

4. Attempt any **TWO** question of the following : [10]
 - (a) Draw and explain the DHCP Client Transition diagram.
 - (b) How do you established an association in SCTP? Explain.
 - (c) Explain the features of Stream Control Transmission Protocol.
 - (d) Differentiate between a TCP header and a SCTP header.

5. Attempt any **TWO** question of the following : [10]
 - (a) What are the types of TFTP messages? What is the purpose of each one?
 - (b) Explain Persistence and non-persistence connection of HTTP.
 - (c) Describe NVT character set for option negotiation.
 - (d) List and explain the components of SSH.

6. Attempt any **TWO** question of the following : [10]
 - (a) 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 a LAN or a WAN,

- (b) Explain the phases of mail transfer.
- (c) Write the functions of IMAP4 that are not carried out by POP3.
- (d) Explain the two techniques used for traffic shaping to improve Quality of Service.

7. Attempt any **THREE** question of the following :

[15]

- (a) Explain the extension headers in IPv6.
- (b) Explain the timers used in Routing Information Protocol.
- (c) List and explain various features of TCP.
- (d) Explain the features of Stream Control Transmission Protocol.
- (e) What is the concept of out-of-band signaling?
- (f) List and explain the Positive Completion Responses of SMTP.

Paper Discussion Schedule for all Subjects: T.Y.B.Sc.IT (Sem. VI)

Date	Day	Timing	Centre
17 April 2017	Monday	9.00 a.m. to 11.00 a.m.	Dadar
17 April 2017	Monday	12.00 p.m. to 2.00 p.m.	Ghatkopar
17 April 2017	Monday	3.00 p.m. to 5.00 p.m.	Dombivli
18 April 2017	Tuesday	9.00 a.m. to 11.00 a.m.	Borivali
18 April 2017	Tuesday	12.00 p.m. to 2.00 p.m.	Andheri
19 April 2017	Wednesday	9.00 a.m. to 11.00 a.m.	Nerul

