

Seat No. : _____

NQ-123

November-2017

**4th Year M.Sc., (CA & IT) Integrated
Advanced Networking**

Time : 3 Hours]

[Max. Marks : 100

1. (A) Answer the following questions : **15**
- (1) What are advantages of Address Resolution Protocol ?
 - (2) What are the ranges of private IP address ?
 - (3) Which three fields of datagram used to control fragmentation ?
 - (4) Write down about ARP cache revalidation.
 - (5) Explain format of IPv4 datagram.
- (B) Answer the following questions : **5**
- (1) What is loopback IP address ?
 - (2) Define : directed broadcast address.
 - (3) How will you find data area of IPv4 datagram ?
 - (4) What are two disadvantages of fragmentation ?
 - (5) What is typical time out of ARP cache ?
2. (A) Answer the following questions : **16**
- (1) Write a short note on how IP software handles incoming datagram.
 - (2) How does network manager or users identify reachability of packet ? Also draw diagram of echo request and reply.
 - (3) Find out network id, host per network, subnet mask and block size of 172.168.0.0/22.
 - (4) Write down about unified forwarding algorithm.
- (B) Answer the following questions : **4**
- (1) Draw format of pseudo header which is used during UDP checksum.
 - (2) Define ICMP message type : (a) 1 (b) 8

3. Answer the following questions : 20
- (1) What are characteristics of reliable delivery services ? **OR** Describe two explicit techniques of feedback.
 - (2) Which technology provides transparent IP level access to internet from a host with private address ? Describe its translation table creation.
 - (3) Explain DHCP message format.
 - (4) Write short note on Segment, Flow control and Windows size.
 - (5) What are the states of lease renewal ? Explain each state in detail.
4. (A) Answer the following questions : 12
- (1) How does caching technique use in domain name server to make efficient lookup system.
 - (2) Which protocol is popular as an alternative of textual remote terminal ? Explain it with its services in detail.
 - (3) Explain the protocol which is specified for mail exchange.
- (B) Answer the following questions : 8
- (1) What are the reasons of inefficient translation of domain server ?
 - (2) How can a user receive e-mail without a permanent connection ?
 - (3) What are features of FTP ? (Any two)
 - (4) Draw diagram of Telnet terminal session.
5. Answer the following questions : 20
- (1) Write down characteristics of HTTP.
 - (2) Explain basic types of negotiation which is being used in hypertext transfer protocol header.
 - (3) Define aspects of network security.
 - (4) How can firewall use a packet filter effectively ? Write down implementation of firewall.
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