

VT-April-09- 341

m-E -I Sem- Comp 416109
Elective I:- Network Protocols & Networking

Con. 3549-09.

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(3 Hours)

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[Total Marks : 100

N.B. : (1) Question No. 1 is **compulsory**.(2) Solve any **four** questions out of remaining **six** questions.

1. (a) How many class A, B and C networks exist ? Exactly how many hosts can a network in each class have ? Explain. 10
 (b) System "A" and "B" are on the same network connected through ethernet and having ETH Address OXB234567890AB and OXB23456781234. IP Address of systems A and B are 198.162.1.1 and 198.162.1.2 show the ARP request and reply packets. 10
2. (a) Compare the following :— 10
 (i) ARP and RARP
 (ii) IPv4 and IPv6.
 (b) Explain silly window syndrome. Explain Nagle's algorithm and Clark's solution. 10
3. (a) An ICMP message has arrived with the header as shown below : 10
 05 00 11 12 11 03 03 02 (Hex)
 Analyse the header. muadda.com
 (b) Comment on "Internet Protocol provides an unreliable, connectionless datagram delivery service". 10
4. (a) Explain TCP state transition diagram. 10
 (b) Explain congestion control in TCP. 10
5. (a) Explain in detail Path Vector Routing. 10
 (b) The following is the dump of UDP header in hex format 10
 06 32 00 0D 00 IC E2 17
 (i) What is the source port number ?
 (ii) What is the destination port number ?
 (iii) What is the total length of datagram ?
 (iv) What is the length of the data ?
 (v) What is the client process ?
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6. (a) Explain different ICMP message formats. 10
 (b) Explain in detail how DNS offers a hierarchical naming scheme. 10
7. Write short note on any **four** :— 20
 (a) Socket Programming in TCP/IP