

Total No. of Questions : 6]

SEAT No. :

P49

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**TE/INSEM/APR-54**  
**T.E. (Information Technology)**  
**314450 : COMPUTER NETWORK TECHNOLOGY**  
**(2015 Pattern) (Semester - II)**

*Time : 1 Hours]*

*[Max. Marks : 30*

*Instructions to the candidates:*

- 1) *Answers Q.1 or Q.2, Q3 or Q.4, Q5. or Q.6.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume suitable data if necessary.*

**Q1) a)** What is DHCP? What are it's advantages? explain various messages used in DHCP? [4]

b) Consider a class B network 150.160.0.0 with default subnet mask, how can you divide it into 8 equal subnets? [6]

How many hosts can be accommodated in each sub-networks? For the 5<sup>th</sup> subnet, give the IP address. for i) Network ID ii) First usable host iii) Last usable Host iv) Broadcast IP?

OR

**Q2) a)** Explain the operation of NAT with suitable example. [4]

b) What is ARP & RARP? Explain ARP & RARP with the help of diagram. [6]

**Q3) a)** Explain how token bucket algorithm work in case of smooth and bursty traffic. [4]

b) What is socket? List & explain the socket primitives in client side & server side TCP connection. [6]

OR

**P.T.O.**

- Q4)** a) List & explain why three timers are required in TCP timer management. [4]  
b) Explain with neat diagram TCP header format. [6]

- Q5)** a) Explain in brief SMTP protocol. [4]  
b) What is SNMP? What is the purpose of SMI and MIB in relation to SNMP? [6]

OR

- Q6)** a) List the similarities & difference between POP3 and IMAP. [4]  
b) What is FTP? Where & when it's used? Why it's require two ports? List & explain any four FTP commands. [6]

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