SEAT No. :

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[5058] - 397
T.E. (Computer Engg.)
COMPUTER NETWORKS
(2012 Course) (Semester - II) (End Semester)

Time : 2½ Hours]   *[Max. Marks :70*

Instructions to the candidates:

1)   *Neat diagrams must be drawn wherever necessary.*

2)   *Figures to the right indicates full marks.*

3)   *Assume suitable data, if necessary.*

Q1) a)   Explain transition from IPv4 to IPv6 using tunneling.   **[8]**

b)   Why we need DHCP and Explain DHCP client transition diagram in detail.   **[8]**

c)   Explain BGP routing protocol.   **[4]**

OR

Q2) a)   An organization is granted a block of addresses 14.24.74.0/24. The organization needs to have 3 subblocks of addresses to use in its three subnets as shown below: **[10]**

- One subblock of 120 addresses.

- One subblock of 60 addresses.

- One subblock of 10 addresses.

Find out the first Address, last address of each subblock and their respective subnet masks. Also draw diagram showing all the subblocks. Mention how many address are still unused.

b)   Explain Mobile IP protocol and describe triangular routing problem in Mobile IP.   **[6]**

c)   Draw and explain UDP header in brief.   **[4]**

Q3) a)   Explain Hidden station problem and expose station problem in detail.**[8]**

b)   Explain WAP layered architecture with suitable diagram.   **[8]**

OR

Q4) a) What is Distributed and point coordination function of IEEE 802.11. **[8]**

b) Compare and explain 802.11 ad, 802.11ac and 802.11n. **[4]**

c) Draw the flowchart for CSMA/CA. **[4]**

Q5) a) Describe VoIP using H.323 protocol. **[8]**

b) Explain VANET architecture? List out the challenges in VANET. **[8]**

OR

Q6) a) Explain Video conferencing with Session Initiation Protocol. **[8]**

b) Explain DTN layered architecture. **[8]**

Q7) a) What is virtualization? Explain different types of network virtualization. **[6]**

b) Explain the components of optical network. **[6]**

c) Draw the neat diagram to explain ATM layered architecture. **[6]**

OR

Q8) Write a short note on (Any Three): **[18]**

a) Propagation of signals in optical fibers.

b) GMPLS.

c) Software Defined Network.

d) Piconets.

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