

Total No. of Questions :8]

SEAT No. :

**P1757**

[Total No. of Pages :2

**[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

**P.T.O.**

- 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.

