T.E. (Computer Engineering)  
COMPUTER NETWORKS  
(2012 Pattern)  

Time: 3 Hours  
Max. Marks: 70

Instructions to the candidates:
1) Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
2) Figures to the right indicate full marks.
3) Neat diagrams must be drawn wherever necessary.
4) Assume suitable data, if necessary.

Q1) a) What is DNS? Explain in brief hierarchical structure of DNS.  [6]
    b) Compare link state routing and distance vector routing.  [6]
    c) Explain token bucket and leaky bucket algorithm with diagram.  [8]

OR

Q2) a) Explain POP3 and IMAP4.  [6]
    b) Explain socket programming with its primitives.  [6]
    c) Draw the packet header format of OSPF and explain in detail.  [8]

Q3) a) Compare and explain 802.11a, 802.11b and 802.11g wireless standards with respect to  [8]
    i) Bandwidth.
    ii) Frequency.
    iii) Signal to noise ratio.
    iv) Range.
    b) Draw and explain WAP architecture.  [8]

OR

P.T.O.
Q4)  a)  What is WAE (Wireless Application Environment)? Explain in details.  
     b)  Write a note on:  
        i)  Wireless LAN.  
        ii) WML Script.  

Q5)  a)  Explain the advantage of DTN over IP network with example.  
     b)  Draw and explain V10IP network architecture.  

      OR

Q6)  a)  What is Vehicular network? What are the challenges and applications of vehicular network?  
     b)  What is DTN? Explain different layers of DTN.  

Q7)  Write a note on (any 3):  
     a)  Components of optical network.  
     b)  ATM cell format.  
     c)  GMPLS.  
     d)  SDN.  

      OR

Q8)  a)  What is Virtualization? List advantages and disadvantages of Virtualization.  
     b)  Explain how packet switching is different in optical network than Ethernet.  
     c)  Explain SONET/SDH.  

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