Enrollment No: _____   Exam Seat No:_____

C.U.SHAH UNIVERSITY
Summer Examination-2019

Subject Name: Computer Networks
Subject Code: 4TE05CNW1   **Branch: B.Tech (CE)**
Semester: 5   **Date: 14/03/2019**   **Time : 10:30 To 01:30**   **Marks : 70**

Instructions:
  (1) Use of Programmable calculator & any other electronic instrument is prohibited.
  (2) Instructions written on main answer book are strictly to be obeyed.
  (3) Draw neat diagrams and figures (if necessary) at right places.
  (4) Assume suitable data if needed.

Q-1   **Attempt the following questions:**   **(14)**

  a) Define tunneling.
  b) What is the Hamming distance?
  c) Subnet mask 255.255.0.0 belongs to _____class.
  d) What is checksum in error detection method?
  e) For n devices in a network, what is the number of cable links required for a mesh topology?
  f) What is virtual circuit network?
  g) Discuss Half duplex with example.
  h) What is the purpose of preamble in Ethernet frame?
  i) What is Multiplexing in computer networks?
  j) Give an example of URL and explain its components.
  k) What is an Access Link?
  l) Define Intranet.
  m) Which layer of OSI is responsible for physical addressing?
  n) What is the difference between broadcast and multicast?

Attempt any four questions from Q-2 to Q-8

Q-2   **Attempt all questions**   **(14)**
  a) What is connection oriented and connectionless service? Explain each with example.   **(07)**
  b) Explain Different types of Switching methods with examples.   **(07)**

Q-3   **Attempt all questions**   **(14)**
  a) Draw the layered architecture of OSI reference model and write the at least two services provided by each layer of the model.   **(07)**
  b) Explain Distance Vector routing with example.   **(07)**

Q-4   **Attempt all questions**   **(14)**
  a) What do you mean by random access protocols? Explain slotted ALOHA in brief.   **(07)**
  b) Describe Go Back N and Selective Repeat protocol.   **(07)**

Q-5 **Attempt all questions** **(14)**
  a) Explain Leaky bucket algorithm. **(07)**
  b) Write short note on DNS. **(07)**

Q-6 **Attempt all questions** **(14)**
  a) Explain IPv4 datagram format and importance of each field. **(07)**
  b) What do you mean by congestion and overflow? Explain the slow-start **(07)**
      component of the TCP congestion-control algorithm

Q-7 **Attempt all questions** **(14)**
  a) Explain in detail X.25. **(07)**
  b) What do you mean by guided transmission media? Enlist various guided **(07)**
      media used for data transmission. Explain co-axial cable in detail.

Q-8 **Attempt all questions** **(14)**
  a) Give architectural overview of WWW. **(07)**
  b) A bit stream 110101011 is transmitted using standard CRC method. The **(07)**
      generator polynomial is $x4+x1+1$ .Show the actual bit string transmitted.