NTK/KW/15/7496

Faculty of Engineering and Technology

Sixth Semester B.E. (Comp. Sci. Engg.) C.B.S.

Examination

COMPUTER NETWORK

Time : Three Hours]   [Maximum Marks : 80

INSTRUCTIONS TO CANDIDATES

(1)   All questions carry marks as indicated.

(2)   Solve Question No. **1 OR** Question No. **2**.

(3)   Solve Question No. **3 OR** Question No. **4**.

(4)   Solve Question No. **5 OR** Question No. **6**.

(5)   Solve Question No. **7 OR** Question No. **8**.

(6)   Solve Question No. **9 OR** Question No. **10**.

(7)   Solve Question No. **11 OR** Question No. **12**.

(8)   Due credit will be given to neatness and adequate dimensions.

(9)   Illustrate your answers wherever necessary with the help of neat sketches.

1. (a) Differentiate between TCP/IP and ISO OSI Reference model. 7

   (b) How layer n interacts with n + 1 with service provided by each layer ? 5

   (c) List the various LAN topologies. 2

OR

2. (a) What are different types of service primitives ? Explain with example. 5

   (b) Differentiate between computer network and distributed system. 6

   (c) What are the various categories of Network ? 3

3. (a) Explain Stop and Wait ARQ Protocol. 6

   (b) How does Simplex Stop and Wait Protocol work ? Write the algorithm for it. 7

OR

4. (a) Explain sliding window protocol in detail. 6

   (b) What are the 3 kinds of frames in HDLC protocol ? Explain each one in detail. 7

5. (a) Differentiate between Pure ALOHA and Slotted ALOHA. 6

   (b) List the types of LCP packets in PPP protocol. 4

(c) What is CSMA/CD protocols ?　3

OR

6. (a) Explain difference between FDMA, TDMA, CDMA.
　7

(b) Write short notes on :

(i) Traditional Ethernet

(ii) Fast Ethernet.　6

7. (a) Explain and differentiate between Adaptive and Non-Adaptive Routing Algorithm.　8

(b) What is the optimality principle in Routing ?　5

OR

8. (a) Explain Dijkstra's shortest path Algorithm with suitable example.　7

(b) What routing technique is applied in flooding ? How flooding affect network performance ?　6

9. (a) What do you mean by congestion ? How choke packet algorithm helps in congestion control ?　7

(b) Write short notes on :

(i) Leaky Bucket Algorithm

(ii) Token Bucket Algorithm.　7

OR

10. (a) Write short notes on :

    (i) ARP

    (ii) RARP.   6

   (b) Explain the Internet Protocol (IP).   4

   (c) Compare between IPv4 and IPv6.   4

11. (a) Discuss in brief different Quality Of Service (QOS) parameters used in transport layer.   7

   (b) How TCP is different from UDP ? Why both are required in transport layer ?   6

OR

12. Write short notes on (any **three**) :

    (i) ISDN System Architecture

    (ii) ATM Layers

    (iii) Crash Recovery

    (iv) Wireless LANS ; IEE 802.11   13