Sample Test Paper-I

Course Name : Diploma in Computer Engineering Group

Course Code : CO/ CD/ CM/ CW

Semester   : Fourth

17429

Subject   : Computer Network

Marks   : 25   **Time: 1 Hours**

Instructions:

1. All questions are compulsory

2. Illustrate your answers with neat sketches wherever necessary

3. Figures to the right indicate full marks

4. Assume suitable data if necessary

5. Preferably, write the answers in sequential order

Q.1) Attempt any THREE   **9 Marks**

a. What is switch? Why switch is better than hub give the reason?

b. State three advantage of bus topology?

c. Enlist any three characteristics of LAN?

d. Define computer network? Enlist any four application of it?

Q.2) Attempt any TWO   **8 Marks**

a. Explain human network with an example.

b. Compare LAN, MAN and WAN (ANY 4 POINTS).

c. Describe gateway? Under which situation gateway is used in the network.

Q.3) Attempt any TWO   **8 Marks**

a. Whether ring is active or passive topology. Justify your answer

b. For efficient star topology we have to choose centralized device between hub and
    switch which device you prefer? Justify your answer.

c. For Network having 10 user, data and resource need to be restricted, network administrator is
    required .which network architecture you preferred.

Sample Test Paper-II

Course Name : Diploma in Computer Engineering Group

Course Code : CO/ CD/ CM/ CW

Semester   : Fourth   **17429**

Subject   : Computer Network

Marks   : 25   **Time: 1 Hours**

Instructions:

1. All questions are compulsory

2. Illustrate your answers with neat sketches wherever necessary

3. Figures to the right indicate full marks

4. Assume suitable data if necessary

5. Preferably, write the answers in sequential order

Q.1) Attempt any THREE   **9 Marks**

   a. Draw the diagram of UTP cable. Why cable which is used in network is twisted (UTP)?

   b. Compare Wi-Fi and Wi-Max network (any three points)

   c. Write down the range of all classes of IPV4 and their subnet mask

   d. Explain the data encapsulation process in OSI models.

Q.2) Attempt any TWO   **8 Marks**

   a. Write the name of the layers that performs the following function in OSI.

       a) Data Encryption b) Error Detection c) File Transfer d) Data Encoding

   b. Compare SLIP and PPP Protocols. (Any 4 Points)

   c. Describe the frame format of UDP protocols with neat diagram.

Q.3) Attempt any TWO   **8 Marks**

   a. Describe any three function of session layer?

   b. To design a bus topology which cable is preferred .justify your answer.

   c. There are two different network in a company called account department and admin
       department network.
       User from one network wants to connect user of another network. Account department
       network IP is 192.168.2.10 to 192.168.2.20 having subnet mask 255.255.255.0 .while admin
       department network IP is 192.168.3.10 to 192.168.3.20 having subnet mask 255.255.255.0,
       which device is used to connect these two networks. Justify your answer.

Sample Question Paper

Course Name : **Diploma in Computer Engineering Group**

Course Code : **CO/ CD/ CM/ CW**

Semester **: Fourth**

17429

Subject **: Computer Network**

Marks **: 100** Time: 3 Hours

Instructions:

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Assume suitable data if necessary
5. Preferably, write the answers in sequential order

Q.1 A Attempt any SIX **12 Marks**

 a. Enlist any two benefits of computer networks.

 b. Define computer network. Enlist its types

 c. Draw following topologies:

  i. Bus

  ii. Hybrid

 d. Define network topology. Enlist its types

 e. Give any two advantages of twisted pair cable.

 f. Give the meaning of 10baseT and 10base2

 g. Name two reference models.

 h. Enlist different IP address Classes

Q.1 B Attempt any TWO **08 Marks**

 a. Describe any four situations in which server based networks are more superior to peer to peer network.

 b. Under what circumstances ring topology is most suitable? Name all devices used in establishing ring topology.

 c. In star topology which device is preferable as a star device between switch and hub? Justify your answer.

Q.2 Attempt any FOUR 16 Marks

   a. Distinguish between LAN, MAN and WAN (Any four points).

   b. Enlist the essential components required to design computer network. Describe any one in brief.

   c. Explain the different modes of fiber optic cable.

   d. Two servers, one situated in Mumbai and another one is situated in Canada want to share data and resources with each other. Which transmission media is suitable to connect them with each other? Justify.

   e. Describe the following services in brief:
      i. Backing Up Data
      ii. E - mail

   f. Give four advantages and disadvantages of co-axial cable.

Q.3 Attempt any FOUR 16 Marks

   a. Describe PAN and CAN in brief.

   b. Compare Tree Topology and Mesh Topology.

   c. Explain OSI reference model with its layered structure.

   d. Compare and contrast between OSI reference model and TCP/ IP network model.

   e. Explain horizontal and vertical communication.

   f. Classify the following protocols into connections oriented, connection less protocols and justify your answer
      i. TCP
      ii. IP
      iii. VDP
      iv. SLIP

Q.4 Attempt any FOUR 16 Marks

   a. Compare IPV4 and IPV6 (Any four Point)

   b. Explain subnet masking.

   c. Distinguish between Wi – Fi and Wi-Max network (any two point). Write down any two characteristics of Wi – Fi

   d. What is MAC address? How it is located?

   e. Which services are provided by application layer? Give any two applications of any three services.

   f. Give any four advantages and disadvantages of client server network.

Q.5 Attempt any FOUR   **16 Marks**

    a. Differentiate SLIP and PPP on any four points.

    b. State the situations under which gateways are necessary in the network. Give one example.

    c. To design a star topology which cable is preferred .Justify your answer

    d. Explain TCP/IP model with neat diagram.

    e. What is Wire shark?

    f. You are said to establish a small network with minimum cost, at least 10 computers and also necessary to use the centralized database. Which type of network and topology you will prefer in this situation. Justify your answer.

Q.6 Attempt any TWO   **16 Marks**

    a. Explain OSI model with neat diagram. Which layer of OSI model packages raw data bit into data frames? Describe bit Stuffing with one example.

    b. Explain how TCP/ IP basic and advanced properties are configured.

    c. Justify the sentence: "Two similar devices are connected with cross cable and two dissimilar devices are connected with straight cable. Give pin configuration of RJ – 45 connectors.