

**HOLIDAY HOME WORK**  
**COMPUTER NETWORK AND COMMUNICATION**

Ques.1

a) What was the role of ARPANET in the Computer Network?

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b) Which of the following units measures the speed with which data can be transmitted from one node to another node of a network? Also, give the expansion of the suggested unit.

1

- (i) KMph      (ii) Mbps      (iii) MGps

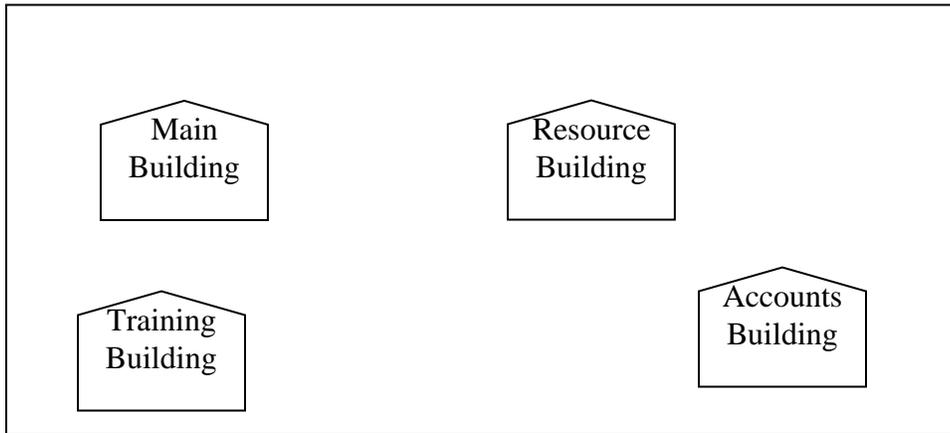
c) Write the full forms of the following:

1

- (i) FTP      (ii) FSF

d) “Vidya for All” is an educational NGO. It is setting up its new campus at Jaipur for its web based activities. The campus has four buildings as shown in diagram below:

4



Center to center distances between various buildings as per architectural drawings (in meters) is as follows:

Main Building to Resource Building	120m
Main Building to Training Building	40m
Main Building to Accounts Building	135m
Resource Building to Training Building	125m
Resource Building to Accounts Building	45m
Training Building to Accounts Building	110m

Expected number of Computers in each building is as follows:

Main Building	15
Resource Building	25
Training Building	250
Accounts Building	10

- (i) Suggest a cable layout of connection between the buildings.  
 (ii) Suggest the most suitable place (i.e building) to house the server of this NGO. Also provide a suitable reason for your suggestion.

- (iii) Suggest the placement of the following devices with justification:
  - i. Repeater
  - ii. Hub/Switch
- (iv) The NGO is planning to connect its International office situated in Delhi. Which out of following wired communication links, will you suggest for very high speed connectivity?
  - i) Telephone Analog Line      ii) Optical Fibre      iii) Ethernet Cable

e) What are cookies?

1

f) What do you mean by FLOSS?

- Q2. (a) Compare any two Switching techniques. (1)
- (b) What do you mean by a router and switch? (1)
- (c) What is web Portal ? Name any one. (1)
- (d) How is Freeware different from Free Software? (1)
- (e) Expand the following : (2)

- a) FLOSS      b) HTML      c) GNU      d) ARPANET

(f) Akruti Software Inc has set up its new Branch at Bangalore for its office and web based activities. It has four wings of buildings namely A , K, R , S. (4)

The distance between the wings are as follows :

Wing A to K	40 M
Wing K to R	120 M
Wing R to S	60 M
Wing A to S	170 M
Wing K to S	150 M
Wing A to R	70 M

The number of computers in each wing is shown below:

Wing A	25
Wing K	50
Wing R	125
Wing S	10

- i) Suggest a most suitable topology along with layout for connecting all the four wings.
- ii) Suggest the most suitable place to house the server with suitable reason.
- iii) Suggest the placement of the following device with justification.





Varanasi Office	85
Kanpur Office	107
Saharanpur office	105

i) Suggest the placement of the *repeater* with justification.

[1]

ii) Name the branch where the *server* should be installed. Justify your answer.

[1]

iii) Suggest the *device* to be procured by the company for connecting all the computers within each of its offices out of the following devices.

[1]

- Modem
- Telephone
- Switch/Hub

iv) The company is planning to link its head office situated in Lucknow with the office at Saharanpur. Suggest an economic way to connect it; the company is ready to compromise on the speed of connectivity. Justify your answer.

[1]