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4. Full transport layer:-

The transport layer of OSI model, offers end-to-end communication b/w end devices through a network. Depending on the application the transport layer offer reliable connection oriented or connectionless best-effort communication.

5. Session layer:-

The session layer provide a lot of services which include the tracking of a number bytes that each end of the session has acknowledge receiving from the other end of the session.

6. Presentation layer:-

The presentation layer is responsible for how an application formats the data to be send out into the network. The presentation layer basically allow to send the message.

7. Application layer:-

The application

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Question NO: 1

Part - "b"

Advantages Are:

- Single layer to study as all the functionalities is provided to this layer.
- Higher Bandwidth numbers of layer reduced.
- It reflect the real life separation of the application from the TCP downward sections of the OSI model.

Disadvantages Are:

- Make reasoning about architecture of network system less effective.
- There will security issue as the network security and application security will open at a single point which expose our network open to our threat.
- It will makes trouble shooting hard as multiple errors occur at a single.

Question NO: 2.

Part: A"

There are seven layers of OSI model.

1. Physical layer:-

The Physical layer of OSI model defines Connector and Interface Specifications, as well as the medium requirements. Electrical, mechanical, functional and Procedural specification are provided for sending a bit stream a computer network.

2. Data link layer:-

Allow a device to access the network to send and receive the messages. Offers a Physical address so a device data can be send on the network. works device networking software when sending and receiving messages and it will also provide error detection capability.

3. The network layer:-

The network layer of the OSI model, provides an end-to-end logical addressing system so that

a packet of data can be routed across several layers & networks. Note that the network layer addresses can also be referred as logical addresses.

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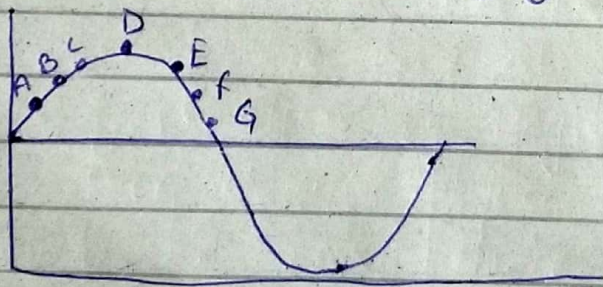
7. Application layer:-

The application

layer provides an interface for the end user operating a device connected to a network. This layer is what the user sees, in terms of loading an application, that is the application layer is the data user views while using this application.

Q. Part : b"

Phase is a specific location in ~~sign~~ sine wave. In this case we cannot plot phase of sine wave in time phase plot is the wave constantly changing.



From this figure we know that the points are in ~~the~~ different position thus we cannot exactly plot the phase in time phase plot.

Question NO: 3

Part "b"

Given Data:-

a) $N = 10,000$

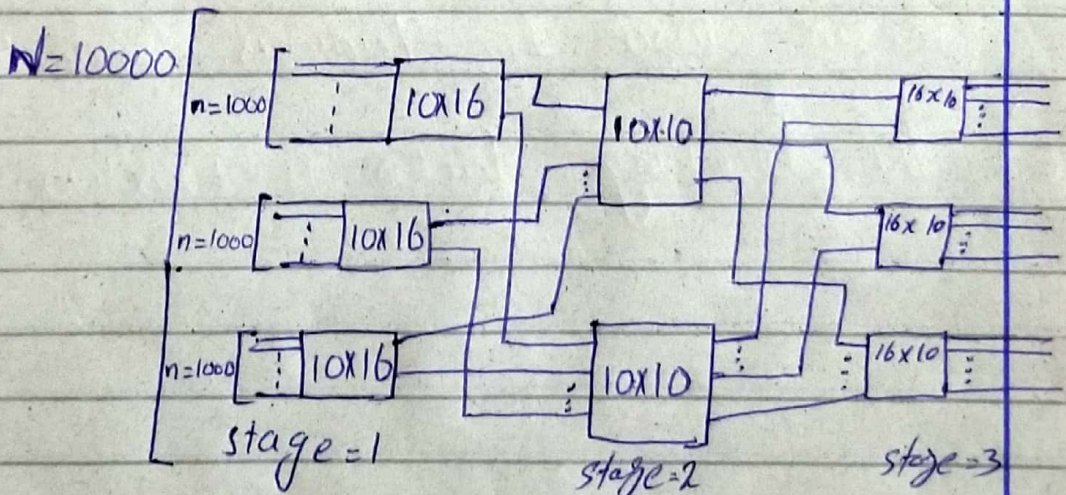
$n = 1000$

$K = 16$

In First stage we have $N/m = \frac{10000}{1000} = 10$

Each cross bars size is 10×16 .
 Second stage four cross bars of size 10×10 .

Third stage we have 10 cross bars which size have 16×10 .



b) Total number of cross bars

$$= 10(10 \times 16) + 16(10 \times 10) + 10(16 \times 10)$$

$$= 1600 + 1600 + 1600$$

$$= 4800$$

c) Only 16 simultaneous connections are possible for each cross bar. In the first stage this means total number of connections is

$$16 \times 10 = 160$$

d) If we use a cross bar (1000x1000) all input lines can have a connection at the same time that means 1000 simultaneous connections.

e) The blocking factor is $16 \times 1000 = 16\%$.