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BS(SE) section 'A'

Subject: communication and networking.

Q No 1 'b'

Ans

Advantages:-

The advantages of combining the session, presentation and Application layer into a single Application layer is that

(a) single layer to study as well the functionalities provided at this layer

(b) Higher bandwidth as number of layer is reduced

(c) it reflects the real life separation of applications from the Tcp-downward section of the OSI Models.

Disadvantage:-

(a) Can make reasoning about the architecture of network system less effective

(b) there will be security issues as the network security and Application security will open at a single point which may expose our network open to threat.

(c) It makes trouble shooting hard as multiple cross may reside at a single layer.

Q NO 2.

'a'

Ans These are seven layers of the OSI Model.

(1) Application layer (2) presentation layer (3) session layer (4) transport layer (5) Network layer (6) Data link layer (7) Physical layer.

Physical layer:
The lowest layer of the OSI model. It is responsible for the actual physical connection between the devices. It contains information in the form of bits.

Data Link layer:
the data link layer is responsible for node delivery of the messages.

Network layer:
works for the transmissions of data from one host to another located in different networks.

Transport layer:
This layer provides services to application layer. this layer is responsible for end-to-End delivery of the complete message

Session layer:
The layer is responsible for the establishment of connection maintenance of sessions, authentactions and also ensures security.

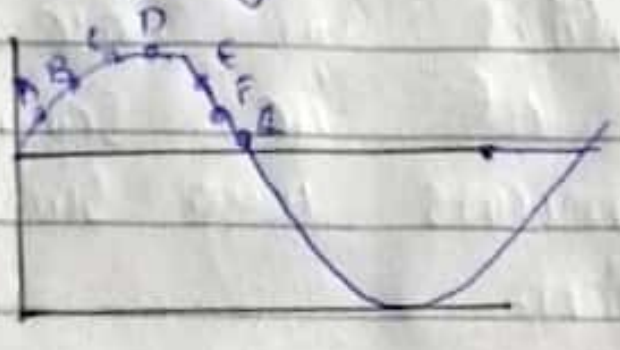
Presentation layer:
The data from the application layer is extracted here and manipulated as per the required format to transmit over the network.

Application layer:
It is implemented by the network Application they produce data which has to be transferred over the network.

ANSWER NO 2.

'b'

Phase is a specific location in a sine wave. So in this scenario we cannot plot phase of a sine wave in a time-phase plot as the wave is constantly changing.



As we can see that all the points are different position thus we cannot explicity plot the phase in time-phase plot.

Q NO 3

'b'

Given Data:-

(a) $N = 10,000$

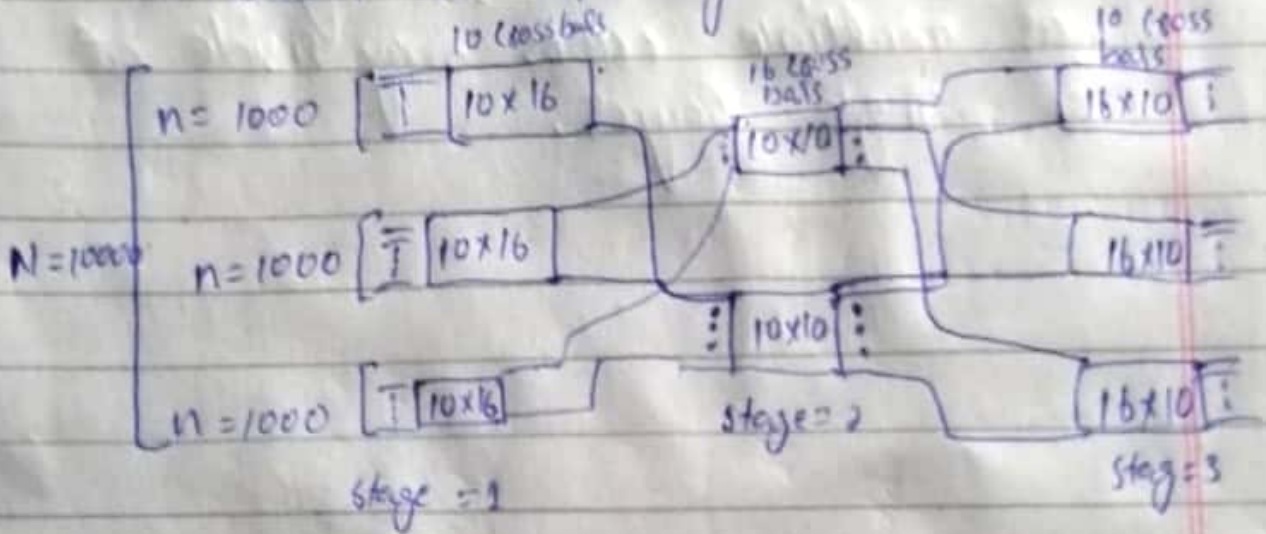
$n = 1000$

$K = 16$

in the first stage we have $N/n = 10000/1000 = 10$

Cross bars, each of size is 10×16

in the second stage we have 4 cross bars of size 10×10 in third stage we have 10 cross bars, each of size 16×10



(b) total number of cross points.

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

$= 1600 + 1600 + 1600$

$= 4800$

(c)

Only 16 simultenious connection are possible for each crossbars at the 1st stage this means that the total number of connection is

$16 \times 10 = 160$

(d)

if we use a cross bars (1000×1000) all input lines can have a connection at the same time which means 1000 simultenious connection.

(e)

The blocking factor is

$160/1000 = 16\%$