

Flavis

14592

Sec 'A'

(10)

also input lines can have  
a connection at the same time  
which means two simultaneous  
connections

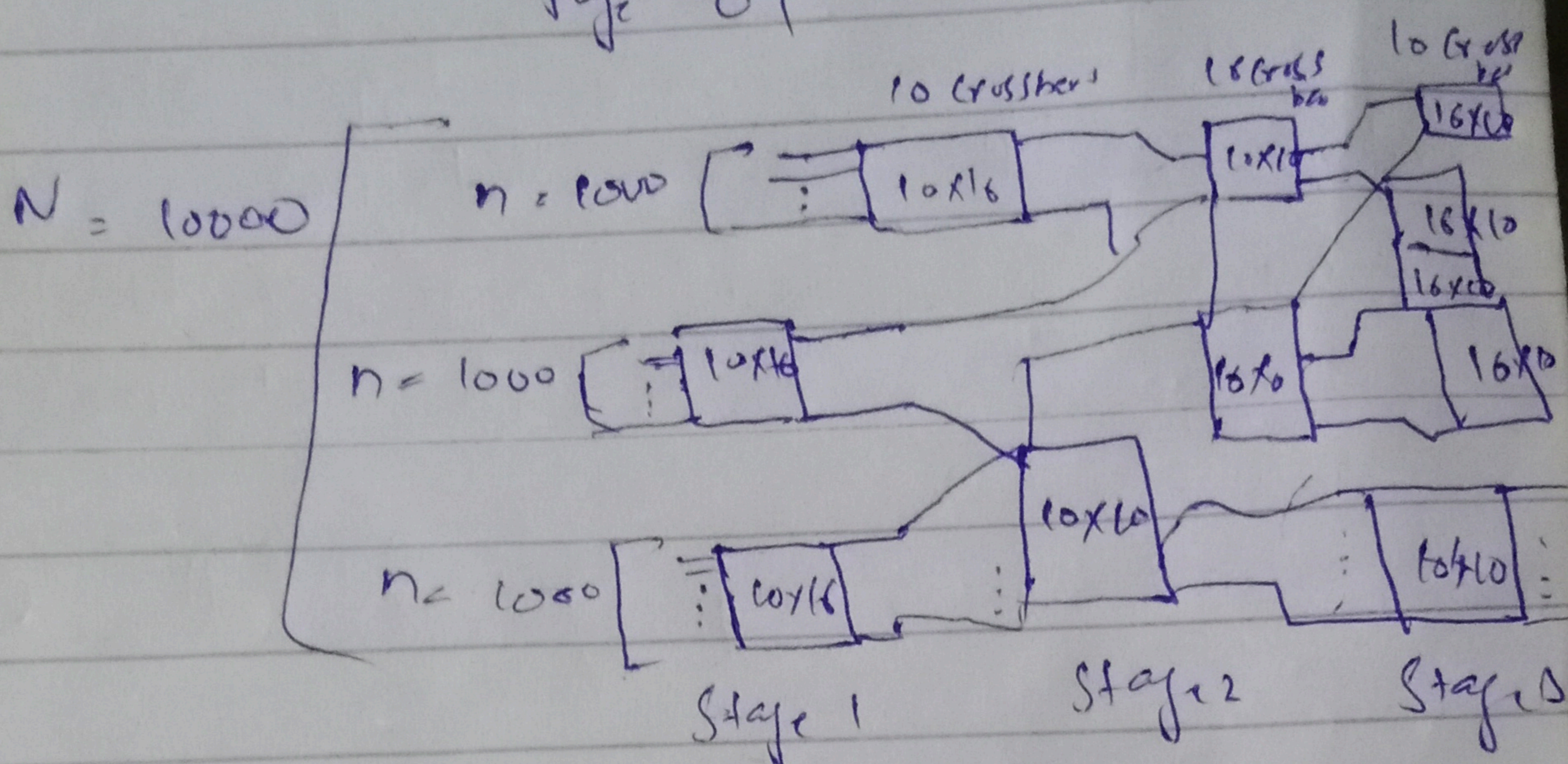
① The blocking factor is  $160/1000 = 16\%$

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ⓐ total no of cross points

$$= 10(10 \times 16) + 16(16 \times 10) + 10(16 \times 10)$$
$$= 1600 + 1600 + 1600 = 4800$$

ⓑ only 16 - simultaneous connections are possible for each crossbar at the

1st stage this means that the total number of connections is  $16 \times 10 = 160$

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Q) No 3 (b)

Given data

$$N = 10,000$$

$$n = 1000$$

$$k = 16$$

In the first stage we have

$$N/n = 10,000 / 1000 = 10$$

Cross bars, each of size is  $10 \times 16$

In the second stage we have four

cross bars of size  $6 \times 10$ , in third

stage we have 10 cross bars each

of size  $16 \times 10$

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## Disadvantages

- (a) Can make reasoning about the architecture of networks system less effective
- (b) There will be security issues as the network security application security will open at single point which may expose our network open to threat.
- (c) It makes troubleshooting hard as multiple errors may reside at a single layer

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Q1(b)

### Advantages

The advantage of combining the Session Presentation and Application layers into a single Application layer is that a single layer to study as all the functionalities provided at this layer, Higher bandwidth as number of layers is reduced. It reflects the real life separation of application from the TCP downward section of the OSI Model.

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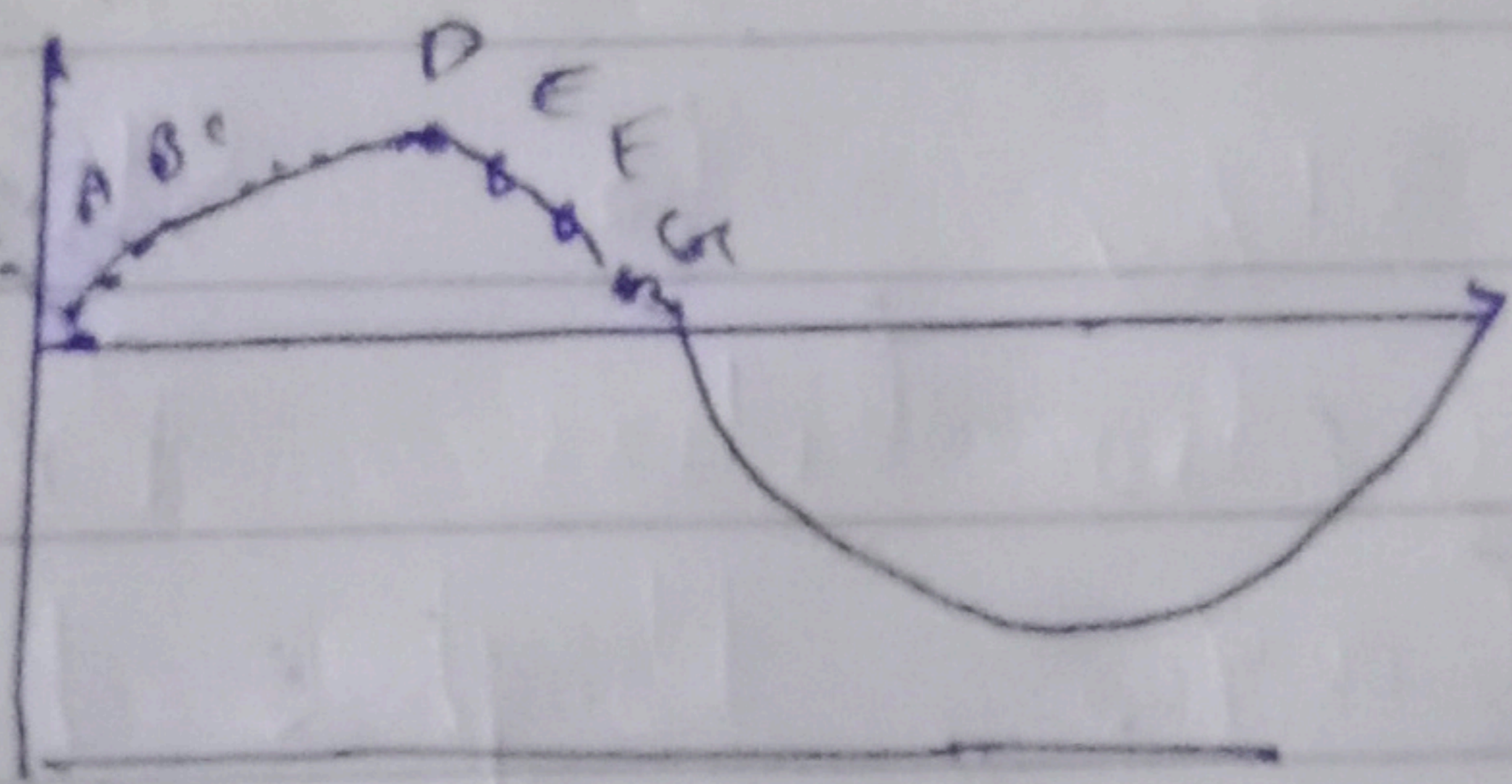
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Q2(b)

Phase is a specific location in a sine wave. In this case 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 in different positions thus we cannot explicitly plot the phase in time-phase plot.

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Application

Layer ;

(04)

# is implemented by the network application they produce data which has to be transferred over the network.

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## Session Layer

The layer is responsible for the establishment of connection maintenance of sessions 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.



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⇒ Network Layer

It works for the transmission of data from one host to another located in different networks.

⇒ Transport Layer: This layer provides services to application layer, it is responsible for end to end delivery of the complete message.

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Q 2(a)

There are seven layers of the OSI model.

⇒ Physical layer: 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:

It is responsible for node to node delivery of the messages.