

SOLUTION QUIZ-01 BSE-6A

QUESTION-01

1. **Answer:** d) Access Delay

- *Explanation:* Access delay is not part of the four main delays (processing, transmission, propagation, and queuing delays).

2. **Answer:** a) Delay caused by signal transmission through a medium

- *Explanation:* Propagation delay is the time it takes for the signal to travel through a medium (e.g., fiber optic or copper wire).

3. **Answer:** a) DSLAM

- *Explanation:* DSLAM (Digital Subscriber Line Access Multiplexer) aggregates multiple DSL connections.

TRUE/FALSE

i. False

ii. False

QUESTION-02

$L = 1500\text{bytes}$

$S = 2.5 \times 10^8$

$R = 2 \text{ Mbps}$

$D_{\text{trans}} = L / R = 1500 \text{ bytes} / 2 \text{ Mbps} = 12,000 \text{ bits} / 2,000,000 = 0.006 \text{ secs} = 6 \text{ msec}$

$\text{Link 1 prop} = D / S = 5000 \text{ km} / 2.5 \times 10^8 \text{ m/s} = 5,000,000 \text{ m} / 2.5 \times 10^8 = 20 \text{ msec}$

$\text{Link 2 prop} = 4000 \text{ km} / 2.5 \times 10^8 = 4,000,000 \text{ m} / 2.5 \times 10^8 = 16 \text{ msec}$

$\text{Link 3 prop} = 1000 \text{ km} / 2.5 \times 10^8 = 1,000,000 / 2.5 \times 10^8 = 4 \text{ msec}$

$\text{End to end} = 6 + 20 + 3 + 6 + 16 + 3 + 6 + 4 = 64 \text{ msec}$