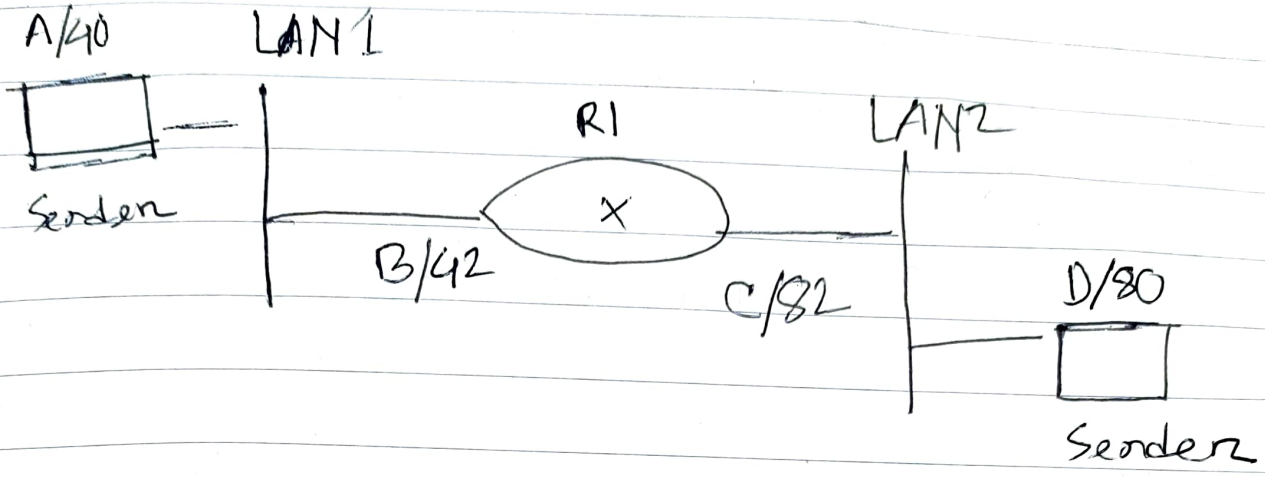
Ans to the Q-01



NOTE

Day :

Date :

Ans no - 2

My id = 1739020 31

So, Bandwidth = 1

Here

Band width = 1 kHz = 1000 Hz

Signal power = 20 W

Noise = 6mW = 0.006 W

We know

$$C = B \cdot \log_2 \left(1 + \frac{S}{N}\right)$$

$$= 1000 \times \log_2 \left(1 + \frac{20}{0.006}\right)$$

$$= 11703.18262 \text{ bit/sec}$$