Worksheet-5.

1. $\lambda = \frac{c}{f} = \frac{3 \times 10^8}{3 \times 10^6}$

$\lambda = 100$ meter.

2. Bandwidth in Tok.1+2

3. 1.536 mbps

4. (a) $\log_{10}\left(\frac{S}{N}\right) = 10$

$\log_{10}\left(\frac{S}{N}\right) = 5$

$S/N = 10^5$

$C = (10 \times 10^3) \log_2 (1+10^5)$

$= 10 + \log_2 (11.05)$

5) 20

10000

5000

$1000 \times 100 \quad 160$

$\simeq 8$ mbps

6) $\frac{8000 \times 1000}{3 \times 10^8}$ ms

$= 2.6$ m/s.

7) 3k byte

2 mbps

$\frac{3000 \times 8}{2 \times 10^9}$

$= 0.012$

8) $= 10 \times 10 \times (1+1)$

$= 100 + 1$

$= 101$ kHz

9) 8 bytes $\times 8 = 64$

$\times 100$

$= 6400$ bps

10) Throughput =

1000×0.36

$= 368$ frames.

6)

1) 1.2.3.4

Ip address belongs to class A.

network ip address = 1.0.0.0

DB address = 1.255.255.255

TB address = 255.255.255.255

7) Ip address belongs to class A, here Ip address is 23.192.157.234.

For network = 8

For host = 24

8) loop back testing means router ca destination. should be same so I sug

10.100.100.100 and 10.100.100.100.