

Worksheet-4.

2) Size of a TCP segment = 10KB

header length = 6

Seq no = 4000

URG flag = 1

URG pointer = 40

Sequence no of 1st byte = 4000

URG pointer = 40

upto seq no of 4000 + 40 = 4040

total of 41 byte

41 byte of urgent data is 4000 - 4040

= (size in bytes) / maximum segment size)

= 12

= 16 MSS

= > (11100 to 1300)

4) (a) The bandwidth of STS-768 link 40 Gbps
all changes the bandwidth from 40 Gbps to 10 Gbps
billion per second to billion per second (Gbps)

$$D = \frac{40}{8}$$

= 5 Gbps.

$$(b) 148 = 1000 \times 1000 \times 1000$$

The bandwidth of link is $5 \times 10^9 \text{bps}$

The total number of sequence number will be 1252.

5.

$$a) \frac{20}{20+1} = \frac{20 \cancel{1} \times 5}{20 \cancel{1} \times 7} = \frac{5}{7}$$

$$b) \frac{20}{20+20} = \frac{20 \cancel{1}}{40 \times 2}$$

$$= \frac{1}{2}$$