

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  $4000 - 4040$

$$= (\text{Size in bytes}) / (\text{maximum segment size})$$

$$= 32 / 2$$

$$= 16 \text{ MSS}$$

$$= > (11100 \text{ to } 1300)$$

4. (a) The bandwidth of STS-168 is 40 Gbps

all changes the bandwidth from giga byte per second to giga byte per second

(Gbps)

$$\Delta D = \frac{40}{8} = 5 \text{ Gbps}$$

b)  $1 \text{ GB} = 1000 \times 1000 \times 1000$

The bandwidth of link is  $5 \times 10^9 \text{ BPS}$   
 The total number of sequence will be  
 $1252$

5)  $\frac{20}{20+5} = \frac{20 \times 14 \times 5}{28 \times 14 \times 7}$

$\boxed{1 = 5/7}$

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

$\boxed{1/2}$