Tutorial 2 Solution

Question 1

Circuit-switched network is more appropriate for the application.

The application involves long sessions with predictable smooth bandwidth requirements. Since the transmission rate is known and not bursty, bandwidth can be reserved for each application session without significant waste.

Question 2

(a) $d_{nodal} = d/s + L/R$

(b) The last bit of the packet is just leaving host A

(c) The first bit of the packet is in the link, not reached host B yet

(d) The first bit of the packet already reached host B

(e) 536 Km

Question 3

(a) 20

(b) 0.1

(c) $\frac{120!}{n!(120-n)!}0.1^n 0.9^{120-n}$

(d) $1 - \sum_{n=0}^{20} \frac{120!}{n!(120-n)!}0.1^n 0.9^{120-n}$

0.003

Question 4

$min(R_s, R_c, R/M)$