DATA COMMUNICATION – EDA415

Solution to Re-Examination 19 August 2000

Problem 1

a) False. Lecture 2, slide 15

b) False. Lecture 4, slide 11

c) True. Lecture 5, slide 16

d) True. Lecture 7, slide 20

e) True. Lecture 12, slide 4

f) False. Lecture 13, slide 10

Problem 2

a) Lecture 1, slides 14,15 and lecture 5, slide 3.

b) Lecture 5, slide 9.

c) lecture 4, slides 12,13,17 and lecture 5, slides 16-18.

d) Lecture 5, slide 20

Problem 3

a) Lecture 1, slide 9.

b) Lecture 1, slide 11.

c) Lecture 2, slides 9,10.

d) Lecture 3, slides 2-7.

Problem 4

a) Lecture 6, slides 5–6.

b) Lecture 6, slides 8–10

c) Lecture 6, slide 21.

d) Lecture 6, slide 25.

Problem 5

a) Lecture 10, slide 3

b) Lecture 10, slide 9

c) Lecture 10, slide 12
Tanenbaum, pages 380-382

$$C + \rho S = M \cdot S \Rightarrow C = (M - \rho)S = 23 \text{ MBps } \cdot 0.04 \text{ s} = 920 \text{ KB}$$

1 MBps at 2 MBps takes $\frac{1}{2}$ s = 0.5 s

d) Lecture 10, slide 12
Tanenbaum, pages 381-384

$$C + \rho S = M \cdot S \Rightarrow S = \frac{C}{(M - \rho)} = \frac{0.5}{23} \text{ sec} = \frac{1}{46} \text{ sec} = 21.7 \text{ msec}$$

Problem 6

a) Lecture 2, slide 12.

b) Lecture 2, slide 15.

c) Lecture 4, slide 21.

Problem 7

a) Lecture 9, slides 12-14

b) Lecture 9, slide 15.

c) Lecture 9, slide 16.

d) Lecture 9, slides 5,7,14.