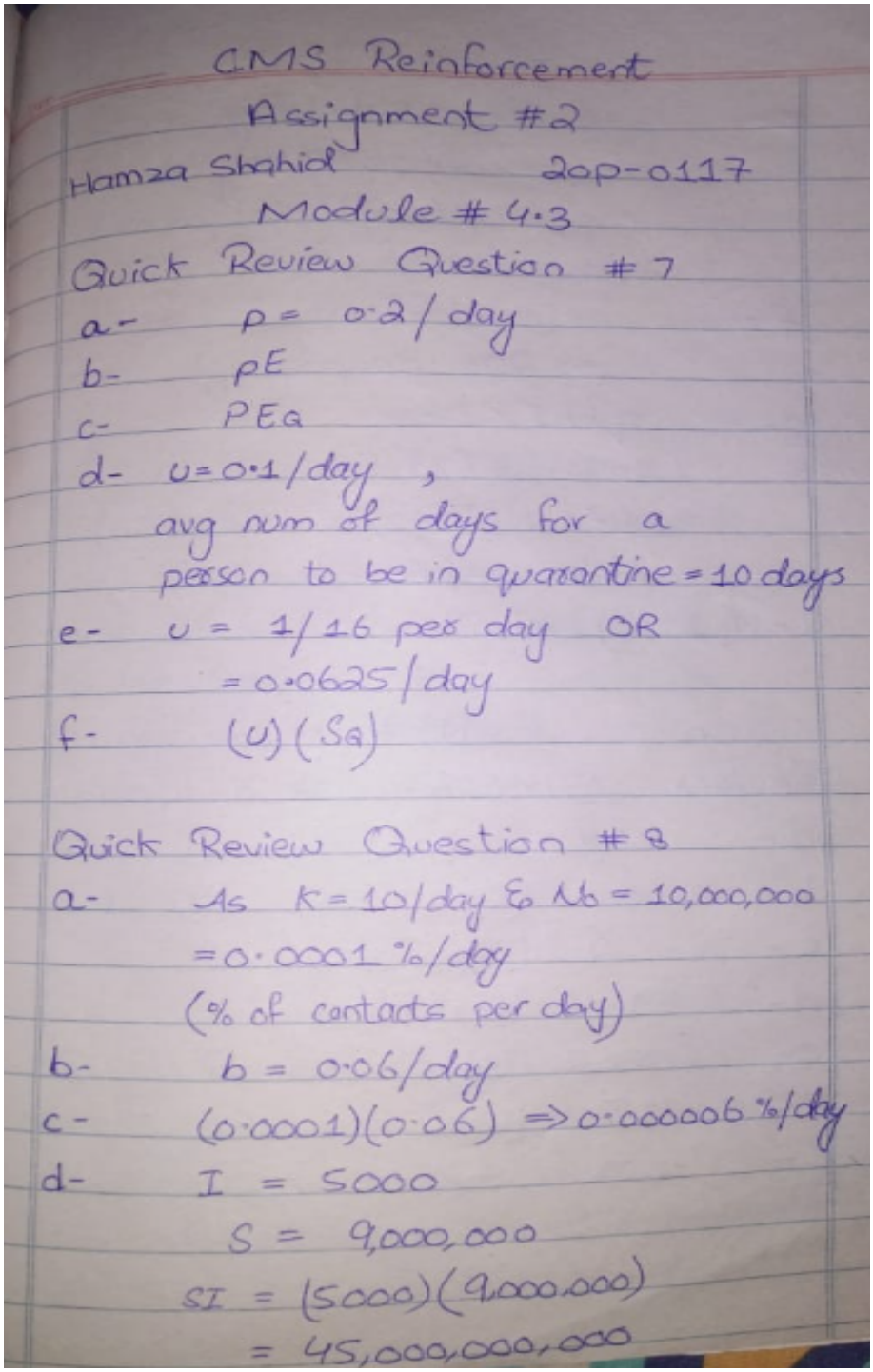
CMS
Reinforcement Assignment # 02



CMS Reinforcement
Assignment #2
Hamza Shahid 20p-0117
Module # 4.3
Quick Review Question # 7
a- p = 0.2/day
b- pE
c- PEa
d- u = 0.1/day ,
avg num of days for a
person to be in quarantine = 10 days
e- u = 1/16 per day OR
= 0.0625/day
f- (u)(Sa)

Quick Review Question # 8
a- As K = 10/day & Nb = 10,000,000
= 0.0001 %/day
(% of contacts per day)
b- b = 0.06/day
c- (0.0001)(0.06) => 0.000006 %/day
d- I = 5000
S = 9,000,000
SI = (5000)(9,000,000)
= 45,000,000,000

e- $= 0.000006\%/day$

$= 0.00000006/day$

$= (0.00000006/day)(45{,}000{,}000{,}000)$

$= 2{,}700$

f- $(0.1)(2700)$

$= 270$ people

g- qkbI₀SIN₀

h- $(1-q)(2700)$

$= (1-0.1)(2700)$

$= 2430$ people

i- $(1-q)kbI_0SIN_0$

Module# 4.2

Review Question #2

a- Δy

b- 0.01 (D)

c- 2 (A)

d- 1.06 (E)

e- 0.02 (B)

f- 15 (H)

g- 100 (G)

Module # 4.1

Quick Review Question # 2

BTS, because a larger portion of the white tip sharks are dying.

Module # 3.1

Quick Review Question # 8

a- (C) Greater because projected area is less, causing air friction to be less, making absolute values of total force, acceleration, change in velocity and speed more.

b- (A) 13 s

c- (B) 21 s

Module # 2.3

Quick Review Question # 2

a- $\Delta P = 1.05(1 - P/1000)(P)(0.1)$

b- 1000 individuals

c- $P + \Delta P = 600 + 1.05(1 - 600/1000)(600)(0.1)$

$= 625.2$ individuals

Module #2.2
Quick Review Question 5

$$Q = Q_0 e^{-0.0004278 69t}$$

For $Q = 0.50 Q_0$

$$0.50 Q_0 = Q_0 e^{-0.0004278 69t}$$

$$\ln(0.50) = -0.0004278 69t$$

$$t = \frac{\ln(0.50)}{(-0.0004278 69)}$$

$$= 1620$$