ECOR 3800A – ASSIGNMENT 3 SOLUTION
DUE DATE: Thursday June 12, 2014 **TERM:** SUMMER 2014
TOTAL: **50 Marks**

QUESTION ONE (10 MARKS)

a) Book value at the end of year 3 (Straight line)
- Depreciation amount per year $\frac{\$(75\,000-5000)}{5} = \$14\,000$ **(1)**
- Book Value (Year 3) = $ 75 000 – (3* $14 000) = **$ 33 000** **(1+1)**

(3 marks)

b) Depreciation amount for year 2 (Double Declining Balance)
- $\propto = 2\left(\frac{1}{5}\right) = 0.4 = 40\%$
- Depreciation for Year 1 = 0.4*($ 75 000) = $30 000
- Book Value at the end of year 1 = $ 75 000 - $30 000 = $ 45 000
- Depreciation amount for year 2 = 0.4*($ 45 000) = **$18 000**

Any other proper method which gives the right answer – full marks
(4 marks)

c) Declining Balance Rate
- $\$\,75\,000 \times (1-rate)^3 = \$\,25\,725$ **(1)**
- $rate = 1 - 0.343^{1/3} = 0.3 = \mathbf{30}\%$ **(1 +1)** **(3 marks)**

QUESTION TWO (5 MARKS)

Allowed Depreciation amount:

$$D = \frac{service\ units\ consumed\ during\ year\ n}{total\ service\ units}\ (I - S)$$

$$D = \frac{(50\,000\ km)}{(300\,000\ km)}\ (90\,000 - 6000) = \$\ \mathbf{14\,000}$$

OR

$0.28* 50 000 = **$ 14 000** **(5 marks)**

QUESTION THREE (15 MARKS)

a) Cost Basis
- Capital Cost = $ 200 000 + $ 40 000 = **$ 240 000** **(2 marks)**

b) For Year 1 (Use the half year rule)
- CCA rate = 0.3* 0.5* $240 000 = $ 36 000 **(3)** **(-2 if no 0.5)**
- UCC = $240 000 - $ 36 000 = $ 204 000 **(1)** **(4 marks)**

A table shall be used for subsequent years
CCA Rate = 30 % (0.3)

Year	Initial ($) (UCC of previous year)	CCA ($) (0.3* Initial)	UCC ($) Initial - CCA
2	204 000	0.3* 204 000 = **61 200**	204 000 - 61 200 = 142 800
3	142 800	**42 840**	99 960
4	99 960	**29 988**	69 972
5	69 972	**20 991. 60**	48 980. 40
6	48 980. 40	**14 694.12**	34 286.28
7	34 286.28	**10 285.88**	24 000.40
8	24 000.40	**7200.12**	16 800.28
9	16 800.28	**5040.08**	11 760.19
10	11 760.19	**3528.06**	8232.14

Award one mark for each correct CCA. (9 marks)

QUESTION FOUR (20 MARKS)

a) Sale Price = $ 110 000

- Year 1 CCA = 0.3*0.5*100 000 = $ 15 000 **(3)**
- UCC Year 1 = $ (100 000 – 15 000) = $ 85 000 **(1)** **(4 marks)**

Table showing UCC and CCA for subsequent years

Year	Initial ($) (UCC of previous year)	CCA ($) (0.3* Initial)	UCC ($) Initial - CCA
2	85 000	25 500	59 500
3	59 500	17 850	41 650
4	41 650	12 495	29 155
5	29 155	8746.50	**20 408.50**

(4 marks)

UCC at the end of Year 5 =$ 20 408. 50
Sale Price > Purchase price (110 000 > 100 000), therefore capital gain and CCA recapture applies

Capital Gains = 0.5*0.4*(110 000 – 100 000) = $2 000 **(2)**
CCA Recapture = (100 000 – 20 408. 50)* 0.4 = $31 836.60 **(2)**
Disposal tax = $31 836.60 + $2000 = **$ 33 836.60 (1)** **(5 marks)**

b) Sale Price = $ 100 000
Sale Price = Purchase Price, No capital gains
CCA Recapture = (100 000 – 20 408. 50)* 0.4 = $31 836.60 (same as (a))

Disposal Tax = $0 + $31 836. 60= **$ 31 836. 60** **(1)** **(1 mark)**

c) Sale Price = $ 30 000
Sale Price > UCC, CCA recapture applies….. (Sale Price – UCC)*0.4
CCA Recapture = (30 000 – 20 408.50)*0.4
Disposal Tax = $0 + $38 836. 60= **$ 3836. 60** **(2+1) (3 marks)**

d) Sale Price = $10 000
UCC > Sale Price, Tax shield adjustment not required
Disposal Tax = 0.4* (20 408.50 – 10 000) = **$ 4 163.40** **(2+1) (3 marks)**