22. (2 points)

The following table summarizes the claim liability estimates of the Appointed Actuary of a P&C insurance company:

Undiscounted Estimate of Claim Liability	$111,453
Discounted Estimate of Claim Liability Excluding PfADs	$103,345
PfAD – Investment Return Rate	$500
PfAD – Claims Development	$7,300
PfAD – Reinsurance Recovery	$4,000

The income tax rate is 35% and the reported reserve is $120,000.

a. (0.5 point)

Describe how a "future tax temporary difference" may arise.

b. (0.5 point)

It is anticipated that in most cases the effect of discounting the asset for future income taxes would not be material to the valuation of a P&C insurer. Define the concept of materiality according to the Canadian Standards of Practice.

c. (1 point)

Calculate the estimated effect of discounting the asset for Future Income Taxes (presently identified as Deferred Tax Assets on the P&C-1).

CONTINUED ON NEXT PAGE

Actual candidate answer for full marks:

a

Inv Income 2011 = 0.045(59000+35000)/2 = 2115

Inv Income 2012 = 0.04(27000+35000)/2 = 1240

Cumulative xs = Beg reserves – Paid + Inv income – End reserves

= 59000-(21000+18000)+(2115+1240)-27000

= -3645

XS/Deficiency Ratio = -3645/59000 = -0.062

b

Use the present value @t=0 (ie end of 2010) of the discounted liabilities and the paid losses.

Examiner's report:

a. Candidates scored well. Some errors included adding investment income from CY 2010, or forgetting to calculate the ratio itself once the excess/deficiency amount had been calculated.
b. Candidates did not score well at all. Although many answers spoke about discounting, they did not include enough detail to indicate that the candidate meant that the discounting should be applied to the paid/outstanding at time t to bring it back to time t-1.

Question 22

Answer key:

a.

According to Canadian Income Tax Regulations, the income tax deduction in respect of an insurer's claim liabilities is equal to 95% of the lesser of the reported reserve and claim liability. The prepayment of tax as a result of the liability deducted for tax purpose being less than the amount reported on the balance sheet give rise to an asset for future income taxes.

b.

An omission, understatement or overstatement is material if it would cause the user to reach a different conclusion or follow a different course of action.

c.

Discounted Estimate of Claim Liability Including PfAD

= 103,345 +500 +7,300 +4,000= 115,145< reported reserve = 120,000 (

Present Value Factor

= (103,345 +500)/ 111,453= 0.9317

Estimated Effect of Discounting the Asset for Future Income Taxes

= (120,000 – 0.95*115,145) * 35% * (1 – 0.9317) = 254

Actual candidate answer for full marks:

a) The future tax temporary difference arises from the fact that the deduction for tax purposes is less than the carried amount. Only 95% of either the reported reserve or liability is deducted, leaving a marginal tax difference.

b) An omission, understatement or overstatement is material if it changes the user's reasonable expectations or the user's decision.

c) = (Reported Reserve – 0.95*min(Reported reserve, APV Claims liability)) * Tax Rate * (1 – PV Factor)

APV Claims liability = Discounted estimate + Pfads = 103,345 + 500 + 7,300 + 4,000 = 115,145

PV Factor = (Discounted estimate + Pfad Discount rate) / Undiscouted estimate = (103,345 + 500)/111,453 = 0.932

Deferred tax asset = (120,000 – 0.95*115,145)*0.35*(1 – 0.932) = 253

Examiner's report:
Candidates performed well on this question and a large proportion of them received full credit. A common mistake was forgetting to include the PfAD for Investment Return Rate in the calculation of the PV factor.

Question 23

Answer key:

a. list of elements:

- subjective analysis of the company's market position
- prospects
- parental support
- sources of capital
- quality and sustainability of reinsurance support
- management quality
- sustainability of earnings

b. Adjusted Investment Yield = 2* (Net Investment Income + OCI)/(Beginning of Year Assets + End of Year Invested Assets – Net Investment Income - OCI)
= 2 * (20,000 + 0)/(182,000+198,000-20,000-0)=11.11%

c.

- Line of Business
- Geographic

Actual candidate answer for full marks:

a)

Parental support
Subjective analysis of the competitive position
Access to reasonable capital

b) Y = (Net II + OCI) * 2 /(Inv Ass + Inv Ass – (Net II + OCI)) = 11.11%