LO.a: Describe the differences between accounting profit and taxable income, and define key terms, including deferred tax assets, deferred tax liabilities, valuation allowance, taxes payable, and income tax expense.

1. A company's income tax expense:
   A. is equal to income tax payable + (net increase in deferred tax liabilities – net increase in deferred tax assets).
   B. appears on the balance sheet.
   C. is equal to income tax payable + net increase in deferred tax assets and liabilities.

2. Income tax paid:
   A. must be equal to the income tax expense.
   B. reduces the income tax payable.
   C. is a provision for the amount of taxes to be paid, and not a cash flow.

3. Accounting profit is:
   A. a provision for income tax expense.
   B. reported on the balance sheet.
   C. reported on the income statement.

4. Income tax payable:
   A. is reported on the income statement.
   B. is tax expense + change in deferred tax assets and liabilities.
   C. is reported on the balance sheet.

5. Using accelerated method of depreciation for reporting purposes and straight-line method for tax purposes would *most likely* result in a:
   A. temporary difference.
   B. valuation allowance.
   C. deferred tax liability.

6. To reduce the deferred tax assets, a company would *most likely* create a:
   A. valuation allowance.
   B. temporary difference.
   C. reserve.

7. The appropriate treatment of deferred tax liabilities that are expected to reverse, is to classify them as:
   A. neither liabilities nor equity.
   B. equity.
   C. liabilities.

8. Deferred tax liabilities are appropriately treated as equity when:
   A. the timing of tax payments is uncertain.
   B. they are not expected to reverse.
   C. the amount of tax payments is uncertain.

9. The appropriate treatment of deferred tax liabilities when both the timing and amount of tax payments are uncertain, is to classify them as:
   A. neither liabilities nor equity.
   B. equity.
   C. liabilities.

10. A taxable income higher than accounting profit results in:
    A. a deferred tax asset.
    B. a deferred tax liability.
    C. none of the above.

LO.b: Explain how deferred tax liabilities and assets are created and the factors that determine how a company's deferred tax liabilities and assets should be treated for the purposes of financial analysis.

11. In the current year, a company increased its deferred tax liability by $500,000. During the year, the company *most likely*:
    A. became entitled to a $500,000 tax refund.
    B. reported a higher accounting profit than taxable income.
    C. had permanent differences between accounting profit and taxable income.

12. The appropriate treatment of deferred tax liabilities that are expected to reverse, is to classify them as:
    A. neither liabilities nor equity.
    B. equity.
    C. liabilities.

13. If the deferred tax liability is not expected to reverse, then it should be treated as:
    A. equity.
    B. liability.
    C. neither equity nor liability.

14. Deferred tax liability is treated as a liability when:
    A. it is expected to reverse.
    B. it is not expected to reverse.
    C. when the amount and timing of tax payments are uncertain.

15. When both the amount and timing of tax payments are uncertain, it is appropriate to classify deferred tax liabilities as:
    A. equity.
    B. debt.
    C. neither liability nor equity.

LO.c: Calculate the tax base of a company's assets and liabilities.

Use the following information from a company's balance sheet to answer questions 16-19.

Arceus Inc. incurred $275,000 in research costs, which were expensed in the current fiscal year. As per the applicable tax laws, the research costs must be expensed over a five year period instead of one year.

The company capitalized development costs of $1,500,000 during the year, of which $250,000 was amortized. As per applicable tax laws, amortization of 20 per cent per year is allowed.

Accounts receivable includes a provision for doubtful debt of about $375,000. As per applicable tax laws, a deduction of 30% of the gross amount is allowed for doubtful debt.

Assume that the dividends are not taxable. The table below gives the carrying amounts for the various elements.

	Carrying amount ($)
Dividends receivable	3,000,000
Research costs	0
Accounts receivable	1,600,000
Development costs	1,250,000

16. The tax base for dividends receivable is *closest* to:
    A. $3,000,000.
    B. $0.
    C. $2,250,000.

17. The tax base for research costs is *closest* to:
    A. $55,000.
    B. $220,000.
    C. $0.

18. The tax base for development costs is *closest* to:
    A. $1,200,000.
    B. $1,250,000.
    C. $250,000.

19. The tax base for accounts receivable is *closest* to:
    A. $1,120,000.
    B. $1,382,500.
    C. $1,487,500.

LO.d: Calculate income tax expense, income taxes payable, deferred tax assets, and deferred tax liabilities, and calculate and interpret the adjustment to the financial statements related to a change in the income tax rate.

20. The following information is available about a company:

(all figures in $ thousands)	**2011**	**2010**
Deferred tax assets	450	300
Deferred tax liabilities	520	350
Net deferred tax liabilities	70	50
Income tax payable	2300	2100

The company's 2011 income tax expense (in thousands) is *closest* to:

A. $2,300.
B. $2,320.
C. $2,520.

21. A company purchased equipment in 2010 for £25,000. The year-end values of the equipment for accounting purposes and tax purposes are as follows:

	2011	**2010**
Carrying amount for accounting purposes	£35,000	£38,000
Tax base for tax purposes	£29,000	£34,000
Tax rate	35%	30%

Which of the following statements *best* describes the effect of the change in the tax rate on the company's 2011 financial statements? The deferred tax liability:

A. increases by £300.
B. decreases by £250.
C. increases by £100.

22. In early 2013, Virgin Atlantic must pay the tax authority $45,000 on the income it earned in 2012. This amount was reported on the company's financial statements as of 31 December 2012 as:

A. income tax expense.
B. a deferred tax liability.
C. taxes payable.

23. In an income statement, income tax expense equals taxes payable, plus the increase in:

A. deferred tax assets and deferred tax liabilities.
B. deferred tax assets, less the increase in deferred tax liabilities.
C. deferred tax liabilities, less the increase in deferred tax assets.

24. A company purchased equipment for $250,000 on 1 January 2011. It is depreciating the equipment over a period of 10 years on a straight-line basis for accounting purposes, but for tax purposes, it is using the declining balance method at a rate of 20%. Given a tax rate of 30%, the deferred tax liability as at the end of 2013 is *closest* to:

A. $12,500.
B. $14,100.
C. $15,500.

The following information relates to Questions 25-27

A company's provision for income taxes resulted in effective tax rates attributable to loss from continuing operations before cumulative effect of change in accounting principles that varied from the statutory federal income tax rate of 30 percent, as presented in the table below.

Year Ended 31 Dec	2012	2011	2010
Expected federal income tax expense (benefit) from continuing operations at 30 percent	($120,000)	$850,000	$785,000
Expenses not deductible for income tax purposes	410,000	39,000	45,000
State income taxes, net of federal benefit	122,000	25,000	78,000
Change in valuation allowance for deferred tax assets	(145,000)	(844,000)	(839,000)
Income tax expense	$267,000	$70,000	$69,000

25. The company's net income (loss) in 2012 was *closest* to:
    A. ($227,000).
    B. ($400,000).
    C. ($667,000).

26. In 2012, the $410,000 adjustment *most likely* resulted in:
    A. an increase in deferred tax assets.
    B. an increase in deferred tax liabilities.
    C. no change in deferred tax assets and liabilities.

27. What does the change in valuation allowance for deferred tax assets indicate over the period of three years from 2010-2012?
    A. increased prospects for future profitability.
    B. decreased prospects for future profitability.
    C. assets being carried at a higher value than their tax base.

28. At the beginning of the year a company purchased a fixed asset for $2,000,000 with no expected residual value. The company depreciates similar assets on a straight-line basis over 20 years, while the tax authorities allow declining balance depreciation at the rate of 10% per year. In both cases the company takes a full year's depreciation in the first year and the tax rate is 30%. Which of the following statements concerning this asset at the end of the year is *most accurate*?
    A. The deferred tax asset is $60,000.
    B. The tax base is $2,000,000.
    C. The temporary difference is $100,000.

LO.e: Evaluate the impact of tax rate changes on a company's financial statements and ratios.

29. The *most likely* impact of a decrease in income tax rates is:
    A. a decrease in deferred tax liabilities.

B. an increase in deferred tax assets.
C. an increase in future tax payments.

The following data is available for a company:

($ Millions)	2015	2014	2013
Machinery value for accounting purposes (carrying amount) (depreciation of $3,000/year)	$15,000	$18,000	$21,000
Machinery value for tax purposes (tax base) (depreciation of $3,650 per year)	$13,357	$17,007	$20,657
Difference	$1643	$993	$343

Use the information above to answer questions 30 – 31:

30. Assume the tax rate is initially 25 percent. The deferred tax liability for 2014 is *closest* to:
    A. $85.75.
    B. $248.25.
    C. $5102.1.

31. Assume the tax rate changes to 20 percent from 25 percent. The change in deferred tax liability due to the change in tax rates for 2015 is *closest* to:
    A. $328.16.
    B. $130.
    C. $82.15.

LO.f: Distinguish between temporary and permanent differences in pre-tax accounting income and taxable income.

32. When certain expenditures result in tax credits that directly reduce taxes, it is *most likely* that the company will report:
    A. A deferred tax liability.
    B. A deferred tax asset.
    C. No deferred tax asset or liability.

33. When accounting treatment of an asset requires it to be expensed immediately while tax rules require it to be capitalized and amortized, it is *most likely* that the company will report:
    A. a deferred tax liability.
    B. a deferred tax asset.
    C. no deferred tax asset or liability.

34. For tax purposes, a company treats advance payments from customers as immediately taxable, but for accounting purposes the advance payments are not recognized until the company's obligation is fulfilled. It is *most likely* that the company will report:
    A. a deferred tax liability.
    B. a deferred tax asset.
    C. no deferred tax asset or liability.

35. The consequence of recognizing an expense which is required under the accounting standards but not permitted under tax laws, is a:
    A. temporary difference.
    B. permanent difference.
    C. deferred tax liability.

36. If the carrying amount of a liability temporarily exceeds its tax base, then it *most likely* results in a:
    A. deferred tax asset.
    B. deferred tax liability.
    C. taxable temporary difference.

37. When a capital expenditure is incurred with a depreciation period set for seven years for accounting purposes but six years for tax purposes, it is *most likely* that the company will report:
    A. a deferred tax liability.
    B. a deferred tax asset.
    C. no deferred tax asset or liability.

Use the information below to answer questions 38-41.

Note I:

Income Taxes

The components of earnings before income taxes are as follows ($ thousands):

	2012	**2011**	**2010**
Earnings before income taxes:			
United States	$67,004	$57,505	$45,583
Foreign	80,533	78,328	65,390
Total	$147,537	$135,833	$110,973

The components of the provision for income taxes are as follows ($ thousands):

	2012	**2011**	**2010**
Income Taxes			
Current:			
Federal	$17,109	$12,305	$10,589
Foreign	15,143	17,067	13,589
	$32,252	$29,372	$24,178
Deferred:			
Federal	($3,220)	$3,482	$1,583
Foreign	4	222	379
	($3,216)	$3,704	$1,962
Total	$29,036	$33,076	$26,140

38. The company's U.S. GAAP income statement in 2012 reported a provision for income taxes *closest* to:
    A. $29,036.
    B. $17,109.
    C. $32,252.

39. The effective tax rate of the company was *highest* in:
    A. 2010.
    B. 2011.
    C. 2012.

40. In comparison to the company's effective tax rate on US income, its effective tax rate on foreign income was:
    A. lower in each reporting year.
    B. higher in each reporting year.
    C. lower in some years and higher in others.

41. If the carrying amount of an asset exceeds its tax base, then it *least likely* results in a:
    A. taxable temporary difference.
    B. deferred tax asset.
    C. deferred tax liability.

LO.g: Describe the valuation allowance for deferred tax assets—when it is required and what impact it has on financial statements.

42. A valuation allowance for doubtful deferred taxes is *most likely* required under:
    A. IFRS.
    B. U.S. GAAP.
    C. both IFRS and U.S. GAAP.

43. The *most likely* impact of creating a valuation allowance is:
    A. a decrease in the income in the period when the allowance is created.
    B. an increase in the income in the period when the allowance is created.
    C. no effect on the income statement.

LO.h: explain recognition and measurement of current and deferred tax items

44. In 2015 company has a deferred tax liability which is expected to reverse in 2016. This deferred tax liability should be measured at the:
    A. 2015 tax rate.
    B. tax rate expected in 2016.
    C. an average of the 2015 and 2016 tax rates.

45. ABC Inc. depreciates equipment using the straight line method for financial reporting and an accelerated method for tax reporting. The carrying amount and tax base on 31 December 2015 are given below.

	Carrying amount	Tax base
On 31 December, 2015	$700,000	$300,000

The equipment was revalued upwards by $100,000 on 1 January 2015. The applicable tax rate is 30%. The deferred tax liability on 31 December 2015 is closest to:
A. $120,000.
B. $90,000.
C. $30,000.

LO.i: Analyze disclosures relating to deferred tax items and the effective tax rate reconciliation, and explain how information included in these disclosures affects a company's financial statements and financial ratios.

46. National Inc. follows U.S. GAAP to report its financial statements. In 2005, National records a valuation allowance of $3,905 against total deferred tax assets of $21,764. In 2004, National recorded a valuation allowance of $2,870 against total deferred tax assets of $18,980. The change in the valuation allowance *most likely* reflects that National's:
    A. Deferred tax liabilities were increased in 2005.
    B. Expectations of future earning power have increased.
    C. Expectations of future earning power have decreased.

47. APL Corp reported a total deferred tax asset in 2009 of $45,189, offset by a $45,189 valuation allowance. APL Corp *most likely*:
    A. Has deferred tax assets equal to deferred tax liabilities.
    B. Fully utilized the deferred tax asset in 2009.
    C. Expects not to earn any taxable income before the deferred tax asset expires.

The following information relates to questions 48-50

The tax effects of temporary differences that give rise to deferred tax assets and liabilities are as follows ($ thousands):

	2011	**2010**
Deferred tax assets:		
Accrued expenses	$9,175	$7,190
Tax credit and net operating loss carry forwards	1,378	2,536
LIFO and inventory reserves	4,876	3,784
Other	1,976	1,534
Deferred tax assets	17,405	15,044
Valuation allowance	(2,236)	(2,945)
Net deferred tax assets	$15,169	$12,099

	2011	**2010**
Deferred tax liabilities:		
Depreciation and amortization	$(25,157)	$(28,250)

Compensation and retirement plans	(4,532)	(8,925)
Other	(910)	(413)
Deferred tax liabilities	(30,599)	(37,588)
Net deferred tax liability	($15,430)	($25,489)

48. An increase in the statutory tax rate would *most likely* hurt the company's:
    A. income statement and balance sheet.
    B. only income statement but not the balance sheet.
    C. only balance sheet but not the income statement.

49. Had the valuation allowance been the same in 2011 as it was in 2010, the company would have reported *higher*:
    A. net income.
    B. income tax provision.
    C. deferred tax assets.

50. In comparison to the income tax provision in 2011, the company's tax payments in cash were:
    A. the same.
    B. lower.
    C. higher.

LO.j: Identify the key provisions of and differences between income tax accounting under International Financial Reporting Standards (IFRS) and US generally accepted accounting principles (GAAP).

51. Aztec Co. incurred and capitalized €2 million of development costs during the year. These costs were fully deductible immediately for tax purposes, but the company is depreciating them over two years for financial reporting purposes. Which is the *most appropriate* way for an analyst to incorporate the differential tax treatment in his analysis? The analyst should include it in:
    A. assets when calculating the company's current ratio.
    B. equity when calculating the company's return on equity ratio.
    C. liabilities when calculating the company's debt-to-equity ratio.

Solutions

1. A is correct. It appears on the income statement.

2. B is correct. It can be less than the income tax expense because of refunds in current period or payments in previous period.

3. C is correct. Accounting profit is reported on the income statement, while taxable income appears on the balance sheet.

4. C is correct. Income tax expense appears on the income statement.

5. A is correct. The resulting deferred tax asset arising from the differences between tax and financial reporting will correct over time and will be a temporary difference. A valuation allowance would arise only if there was doubt on the company's ability to earn sufficient future income required to pay the tax.

6. A is correct. Valuation allowance is created to reduce deferred tax assets.

7. C is correct. The deferred tax represents a future liability if the liability is expected to reverse and therefore requiring a cash tax payment in future.

8. B is correct. The deferred tax represents equity if the liability is not expected to reverse and therefore requiring no tax payment in future.

9. A is correct. The deferred tax should neither be treated as a liability or equity when both the amounts and timing of tax payments resulting from the reversals of temporary differences are uncertain.

10. A is correct. Income taxes paid is higher which results in a deferred tax asset.

11. B is correct. Deferred tax liabilities represent taxes that have not yet been paid (because of the lower taxable income) but have been recognized on the income statement (because of the higher accounting profit).

12. C is correct. The deferred tax represents a future liability if the liability is expected to reverse and therefore requiring a cash tax payment in future.

13. A is correct.

14. A is correct. Deferred tax liability should be treated as liability when it is expect to reverse with a tax payment in future. It should be classified as neither debt nor equity if the amount or timing of payments is uncertain.

15. C is correct. It should be classified as neither debt nor equity if the amount or timing of payments is uncertain.

16. A is correct. Dividends are assumed to be not taxable. The tax base is equal to the carrying amount.

17. B is correct. Tax base for research costs = $\left(275{,}000 - \frac{275{,}000}{5}\right)$= 220,000.

18. A is correct. The carrying amount is $1500000 - 250000 = 1{,}250{,}000$. The tax base is 1500000 – 0.2*1500000 = 1500000 – 300000 = 1,200,000.

19. B is correct. Accounts receivable before any provision = $1{,}600{,}000 + 375{,}000 = 1{,}975{,}000$.
Tax base for accounts receivable = $(1{,}600{,}000 + 375{,}000) - [0.3 * (1{,}600{,}000 + 375{,}000)$ = 1,382,500.

20. B is correct. Income tax expense reported on the income statement = Income tax payable + change in net deferred tax liabilities. The change in the net deferred tax liability is a $20. Therefore, the income tax expense = 2,300 + 20 = 2,320.

21. A is correct. Change in deferred tax liability = Change in rate × Taxable difference: 0.05 *6,000 = £300

22. C is correct. Taxes payable are the taxes that a company must pay in the immediate future.

23. C is correct. Here is the relationship to remember: Income tax expense = income tax payable + change in deferred tax liabilities – change in deferred tax assets.

24. B is correct.
The deferred tax liability is equal to the tax rate times the difference between the carrying amount of the asset and the tax base.
Value for accounting purposes after 3 years: 250,000 – [3 * (250,000 / 10)] = $175,000
Value for tax purposes:
Carrying amount = Start of year balance * (1 – 0.20)
After three years:
250,000 * 0.8 * 0.8 * 0.8 = 128,000
Difference between accounting and tax values = 47,000
Deferred tax liability at 30%: 30% *47,000 = 14,100

25. C is correct. The income tax benefit at the statutory rate of 30 percent is $120,000, indicating that the pre-tax income was a loss of $120,000/0.30 = ($400,000). The income tax provision was $267,000. The company's net loss in 2012 is ($400,000) - $267,000 = ($667,000).

26. C is correct. Accounting expenses that are not deductible for tax purposes lead to permanent difference and therefore do not give rise to deferred taxes.

27. A is correct. Over the given time period, changes in the valuation allowance reduced aggregate income taxes by $1,828,000. The reductions to the valuation allowance were a result of the company being more likely to earn sufficient taxable income to offset the deferred tax assets.

28. C is correct. The temporary difference is the difference between the net book value of the asset for accounting purposes [2,000,000 – (2,000,000/20)] = $1,900,000 and the net book value for taxes, [2,000,000 - 0.10(2,000,000) = $1,800,000]; 1,900,000 – 1,800,000 = $100,000

29. A is correct. A decrease in income tax rates decreases deferred tax assets and deferred tax liabilities.

30. B is correct. The deferred tax liability is the difference between tax base and carrying amount: (18000 – 17007) * 0.25 = 248.25.

31. C is correct. For 2015, the deferred tax liability at 25 percent = 1643*0.25 = 410.75
    The deferred tax liability at 20 percent = 1643 *0.20 = 328.6.
    Change in deferred tax liability = 410.75 – 328.6 = 82.15.

32. C is correct. Tax credits that directly reduce taxes are a permanent difference and permanent differences do not lead to deferred tax.

33. B is correct. The capitalization will result in an asset with a positive tax base and zero carrying value. Amortization means that the difference is temporary. A deferred tax asset is created since there is a temporary difference on an asset resulting in a higher tax base than carrying value.

34. B is correct. A deferred tax asset is created since the advances from customers (liability) exceed the tax base (which is now zero).

35. B is correct. Accounting items that are not deductible for tax purposes will not be reversed and therefore result in permanent differences.

36. A is correct. If the carrying amount of a liability is greater than the tax base a deferred tax asset is created.

37. A is correct. A deferred tax liability is created because the difference is temporary and the tax base will be lower (consequent to more rapid depreciation) than the asset's carrying value.

38. A is correct. The income tax provision for 2012 was $29,036, consisting of $32,252 in current income taxes, of which $3,216 were deferred.

39. B is correct. The effective tax rate of 24.4 percent ($33,076/$135,833) was higher than the effective rates in 2010 and 2012.

40. A is correct. In 2012, the effective tax rate on foreign operations was (15,143 + 4) / 80,533 = 18.8% and the effective U.S. tax rate was (17,109 – 3,200) / 67,004 = 20.7%. In 2011, the effective tax rate on foreign operations was 22.1% and the effective U.S. tax rate was 27.5%. In 2010, the effective tax rate on foreign operations was 21.4% and the effective U.S. tax rate was 26.7%.

41. B is correct.

42. B is correct. A valuation allowance is required under U.S. GAAP if there is doubt about whether a deferred tax asset will be recovered. Under IFRS the deferred tax asset is written down directly.

43. A is correct. Creating a valuation allowance reduces deferred tax asset and income.

44. B is correct. A deferred tax liability should be measured at the tax rate which is expected to apply when the liability is settled (reversed).

45. B is correct. Based on the balance sheet, the deferred tax liability is: (carrying value – tax base) * tax rate = (700,000 – 300,000) * 0.3 = 120,000. However, the effect of revaluation surplus must be removed as it goes directly to equity. This effect is equal to the tax rate * revaluation surplus = 0.3 * 100,000 = 30,000. Hence, the deferred tax liability on 31 December 2015 is: 120,000 – 30,000 = 90,000.

46. C is correct. The valuation allowance is taken against deferred tax assets to represent the uncertainty that future taxable income will be sufficient to fully recover the assets. By increasing the allowance, National Inc. is indicating greater probability that future earnings not will be offset by the deferred tax asset.

47. C is correct. The valuation allowance is taken when there is a greater likelihood that the company will fail to earn sufficient income to offset the deferred tax asset. Since the valuation allowance equals the asset, by extension the company expects no taxable income prior to the expiration of the deferred tax assets.

48. A is correct. A higher tax rate would decrease net income on the income statement and because the company has a net deferred tax liability, the net liability position on the balance sheet would also worsen (be higher).

49. B is correct. If the valuation allowance in 2011 was 2,945 (same as the 2010) rather than 2,236, the company would report lower net income. Recall that high valuation allowance can be thought of as high depreciation which results in lower income. Hence option A is not correct. A higher valuation allowance would result in a lower DTA; hence option C is not correct. A lower DTA means that the income tax expense (also called income tax provision) is higher.

50. C is correct. The net deferred tax liability was smaller in 2011 than in 2010 representing that besides meeting the tax payments provided for in 2011 the company also paid out taxes that had been deferred in earlier years.

51. C is correct. The different treatment for tax purposes and financial reporting purposes is a temporary difference and would create a deferred tax liability. Deferred tax liabilities should be classified as debt if they are expected to reverse with subsequent tax payments.