

CHAPTER 12

Intangible Assets

ASSIGNMENT CLASSIFICATION TABLE (BY TOPIC)

Topics	Questions	Brief Exercises	Exercises	Problems	Concepts for Analysis
1. Intangible assets; concepts, definitions; items comprising intangible assets.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 25	14	1, 2, 3, 5, 6	1, 2, 3	1, 2, 3
2. Patents; franchise; organization costs; trade name.	8, 9, 10, 25	1, 2, 3, 4, 13	4, 5, 6, 7, 8, 9, 10, 11, 13	1, 2, 3, 6	2, 3
3. Goodwill.	12, 13, 14, 18	5, 8, 9	12, 13, 15	5, 6	
4. Impairment of intangibles.	15, 16, 17, 18	6, 7, 8, 9	7, 14, 15	5, 6	
5. Research and development costs and similar costs.	9, 19, 20, 21, 22, 23, 24	10, 11, 12, 13	16, 17	1, 2, 3, 4	1, 2, 4, 5
6. Convergence.	26, 27, 28				

ASSIGNMENT CLASSIFICATION TABLE (BY LEARNING OBJECTIVE)

Learning Objectives	Brief Exercises	Exercises	Problems
1. Describe the characteristics of intangible assets.		1, 2, 3	
2. Identify the costs to include in the initial valuation of intangible assets.	1, 2, 3, 4	5, 7, 9, 10, 11	1, 2, 3, 6
3. Explain the procedure for amortizing intangible assets.	1, 2, 3, 4, 13, 14	4, 5, 6, 7, 9, 10, 11, 13	1, 2, 3, 6
4. Describe the types of intangible assets.		1, 2, 3	
5. Explain the conceptual issues related to goodwill.		12, 13	
6. Describe the accounting procedures for recording goodwill.	5	12, 13, 15	5, 6
7. Explain the accounting issues related to intangible asset impairments.	6, 7, 8, 9	7, 14, 15	5, 6
8. Identify the conceptual issues related to research and development costs.		5, 9	
9. Describe the accounting for research and development and similar costs.	10, 11, 12, 13	4, 6, 8, 16, 17	4
10. Indicate the presentation of intangible assets and related items.	14		4, 6

ASSIGNMENT CHARACTERISTICS TABLE

Item	Description	Level of Difficulty	Time (minutes)
E12-1	Classification issues—intangibles.	Moderate	15–20
E12-2	Classification issues—intangibles.	Simple	10–15
E12-3	Classification issues—intangible asset.	Moderate	10–15
E12-4	Intangible amortization.	Moderate	15–20
E12-5	Correct intangible asset account.	Moderate	15–20
E12-6	Recording and amortization of intangibles.	Simple	15–20
E12-7	Accounting for trade name.	Simple	10–15
E12-8	Accounting for organization costs.	Simple	10–15
E12-9	Accounting for patents, franchises, and R&D.	Moderate	15–20
E12-10	Accounting for patents.	Moderate	15–20
E12-11	Accounting for patents.	Moderate	20–25
E12-12	Accounting for goodwill.	Moderate	20–25
E12-13	Accounting for goodwill.	Simple	10–15
E12-14	Copyright impairment.	Simple	15–20
E12-15	Goodwill impairment.	Simple	15–20
E12-16	Accounting for R&D costs.	Moderate	15–20
E12-17	Accounting for R&D costs.	Moderate	10–15
P12-1	Correct intangible asset account.	Moderate	15–20
P12-2	Accounting for patents.	Moderate	20–30
P12-3	Accounting for franchise, patents, and trade name.	Moderate	20–30
P12-4	Accounting for R&D costs.	Moderate	15–20
P12-5	Goodwill, impairment.	Complex	25–30
P12-6	Comprehensive intangible assets.	Moderate	30–35
CA12-1	Development costs.	Moderate	15–20
CA12-2	Accounting for pre-opening costs.	Moderate	20–25
CA12-3	Accounting for patents.	Moderate	25–30
CA12-4	Accounting for research and development costs.	Moderate	25–30
CA12-5	Accounting for research and development costs.	Moderate	20–25

ANSWERS TO QUESTIONS

1. The three main characteristics of intangible assets are:
 - (a) they are identifiable.
 - (b) they lack physical substance.
 - (c) they are not monetary assets.

2. If intangibles are acquired for shares, the cost of the intangible is the fair value of the consideration given or the fair value of the consideration received, whichever is more clearly evident.

3. Limited-life intangibles should be amortized by systematic charges to expense over their useful life. An intangible asset with an indefinite life is not amortized.

4. When intangibles are created internally, it is often difficult to determine the validity of any future service potential. To permit deferral of these types of costs would lead to a great deal of subjectivity because management could argue that almost any expense could be capitalized on the basis that it will increase future benefits. The cost of purchased intangibles, however, is capitalized because its cost can be objectively verified and reflects its fair value at the date of acquisition.

5. Companies cannot capitalize self-developed, self-maintained, or self-created goodwill. These expenditures would most likely be reported as selling expenses.

6. Factors to be considered in determining useful life are:
 - (a) The expected use of the asset by the entity.
 - (b) The effects of obsolescence, demand, competition, and other economic factors.
 - (c) Any legal, regulatory or contractual provisions that enable renewal or extension of the asset's legal or contractual life without substantial cost.
 - (d) The level of maintenance expenditure required to obtain the expected future cash flows from the asset.
 - (e) Any legal, regulatory, or contractual provisions that may limit useful life.
 - (f) The expected useful life of another asset or a group of assets to which the useful life of the intangible asset may relate.

7. The amount of amortization expensed for a limited-life intangible asset should reflect the pattern in which the asset is consumed or used up, if that pattern can be reliably determined. If the pattern of production or consumption cannot be determined, the straight-line method of amortization should be used.

8. This trademark is an indefinite life intangible and, therefore, should not be amortized.

9. The \$190,000 should be expensed as research and development expense in 2010. The \$91,000 is expensed as selling and promotion expense in 2010. The \$45,000 of costs to legally obtain the patent should be capitalized and amortized over the useful or legal life of the patent, whichever is shorter.

10. Patent Amortization Expense	35,000	
Patents (or Accumulated Patent Amortization).....		35,000

Straight-line amortization is used because the pattern of use can not be reliably determined.

11. Artistic-related intangible assets involve ownership rights to plays, pictures, photographs, and video and audiovisual material. These ownership rights are protected by copyrights. Contract related intangible assets represent the value of rights that arise from contractual arrangements. Examples are franchise and licensing agreements, construction permits, broadcast rights, and service or supply contracts.

Questions Chapter 12 (Continued)

12. Varying approaches are used to define goodwill. They are
- (a) Goodwill should be measured initially as the excess of the fair value of the acquisition cost over the fair value of the net assets acquired. This definition is a measurement definition but does not conceptually define goodwill.
 - (b) Goodwill is sometimes defined as one or more unidentified intangible assets and identifiable intangible assets that are not reliably measurable. Examples of elements of goodwill include new channels of distribution, synergies of combining sales forces, and a superior management team.
 - (c) Goodwill may also be defined as the intrinsic value that a business has acquired beyond the mere value of its net assets whether due to the personality of those conducting it, the nature of its location, its reputation, or any other circumstance incidental to the business and tending to make it permanent. Another definition is the capitalized value of the excess of estimated future profits of a business over the rate of return on capital considered normal in the industry.

A bargain purchase develops when the fair value of the assets purchased is higher than the cost. This situation may develop from a market imperfection. In this case, the seller would have been better off to sell the assets individually than in total. However, situations do occur (e.g., a forced liquidation or distressed sale due to the death of the company founder), in which the purchase price is less than the value of the identifiable net assets.

13. Goodwill is recorded only when it is acquired by purchase. Goodwill acquired in a business combination is considered to have an indefinite life and therefore should not be amortized, but should be tested for impairment on at least an annual basis.
14. Many analysts believe that the value of goodwill is so subjective that it should not be given the same status as other types of assets such as cash, receivables, inventory, etc. The analysts are simply stating that they believe that presentation of goodwill on the statement of financial position does not provide any useful information to the users of financial statements. Whether this is true or not is a difficult point to prove, but it should be noted that it appears contradictory to pay for the goodwill and then immediately write it off, denying that it has any value.
15. Accounting standards require that if events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable, then the carrying amount of the asset should be assessed. The impairment loss is measured as the amount by which the carrying amount exceeds the recoverable amount of the asset. The recoverable amount of assets is measured by their fair value less costs to sale if an active market for them exists. If no market price is available, the present value of the expected future net cash flows from the asset may be used.
16. Yes, Zeno should record the recovery of the impairment loss from last year.
17. Impairment losses are reported as part of income from continuing operations, generally in the "Other income and expense" section. Impairment losses (and recovery of losses) are similar to other costs that would flow through operations. Thus, recoveries of losses should be reported as part of income from continuing operations.
18. The amount of goodwill impaired is \$40,000, computed as follows:
- | | |
|--------------------------|------------------|
| Recorded goodwill | \$400,000 |
| Recoverable amount | <u>(360,000)</u> |
| Impaired goodwill | <u>\$ 40,000</u> |

Questions Chapter 12 (Continued)

19. Research and development costs are incurred to develop new products or processes, to improve present products, or to discover new knowledge. Development costs can be capitalized once economic viability criteria are met. Economic viability indicates that the project is far enough along such that the economic benefits of the R&D project will flow to the company.
20. (a) Personnel (labor) type costs incurred in R&D activities should be expensed as incurred.
(b) Materials and equipment costs should be expensed immediately unless the items have alternative future uses. If the items have alternative future uses, the materials should be recorded as inventories and allocated as consumed and the equipment should be capitalized and depreciated as used.
(c) Indirect costs of R&D activities should be reasonably allocated to R&D (except for general and administrative costs, which must be clearly related to be included) and expensed.
21. See Illustration 12-13.
- (a) Expense as R&D.
(b) Expense as R&D (unless economic viability is achieved.)
(c) Capitalize as patent and/or license and amortize.
22. Each of these items should be charged to current operations. Advertising costs have some minor exceptions to this general rule. However, the specific accounting is beyond the scope of this textbook.
23. ¥35,500,000 (¥17,000,000 + ¥6,000,000 + ¥12,500,000).
24. These costs are referred to as start-up costs, or more specifically organizational costs in this case. The accounting for start up costs is straightforward—expense these costs as incurred. The profession recognizes that these costs are incurred with the expectation that future revenues will occur or increased efficiencies will result. However, to determine the amount and timing of future benefits is so difficult that a conservative approach—expensing these costs as incurred—is required.
25. The total life, per revised facts, is 40 years (10 + 30). There are 30 (40 – 10) remaining years for amortization purposes. Original amortization: $\frac{\$540,000}{30} = \$18,000$ per year; $\$18,000 \times 10$ years expired = \$180,000 accumulated amortization.
- | | |
|------------------|----------------------------|
| \$540,000 | original cost |
| <u>-180,000</u> | accumulated amortization |
| <u>\$360,000</u> | remaining cost to amortize |
- $\$360,000 \div 30$ years = \$12,000 amortization for 2010 and years thereafter.
26. **Similarities** include (1) in U.S. GAAP and IFRS, the costs associated with research and development are segregated into the two components; (2) IFRS and U.S. GAAP are similar for intangibles acquired in a business combination. That is, an intangible asset is recognized separately from goodwill if it represents contractual or legal rights or is capable of being separated or divided and sold, transferred, licensed, rented or exchanged; (3) Under both U.S. GAAP and IFRS, limited life intangibles are subject to amortization, but goodwill and indefinite life intangibles are not amortized; rather they are assessed for impairment on an annual basis; (4) IFRS and U.S. GAAP are similar in the accounting for impairments of assets held for disposal.

Questions Chapter 12 (Continued)

Notable **differences** are: (1) while costs in the research phase are always expensed under both IFRS and U.S. GAAP, under IFRS costs in the development phase are capitalized once technological feasibility is achieved; (2) IFRS permits some capitalization of internally generated intangible assets (e.g., brand value), if it is probable there will be a future benefit and the amount can be reliably measured. U.S. GAAP requires expensing of all costs associated with internally generated intangibles; (3) IFRS requires an impairment test at each reporting date for long-lived assets and intangibles and records an impairment if the asset's carrying amount exceeds its recoverable amount; the recoverable amount is the higher of the asset's fair value less costs to sell and its value in use. Value in use is the future cash flows to be derived from the particular asset, discounted to present value. Under U.S. GAAP, impairment loss is measured as the excess of the carrying amount over the asset's fair value (4) IFRS allows reversal of impairment losses when there has been a change in economic conditions or in the expected use of the asset. Under U.S. GAAP, impairment losses cannot be reversed for assets to be held and used; the impairment loss results in a new cost basis for the asset; (5) under IFRS, acquired in-process research and development (IPR&D) is recognized as a separate intangible asset if it meets the definition of an intangible asset and its fair value can be measured reliably. U.S. GAAP requires acquired IPR&D to be written off.

27. As shown in the analysis below, under IFRS, Sophia's ROA is overstated compared to a U.S. GAAP company.

	<u>IFRS</u>	<u>U.S. GAAP</u>
Net Income	€ 1,125	€ 920*
Average Assets	12,500	12,295**
ROA (Income ÷ Assets)	9%	7.5%

*($€1,125 + €120 - €325$)

**($€12,500 + €120 - €325$)

28. The IASB and FASB have identified a project relating to the accounting for research and development that could possibly converge IFRS and U.S. GAAP on the issue of in-process R&D. One possibility is to amend U.S. GAAP to allow capitalization of in-process R&D similar to the provisions in IFRS. A second project, in a very preliminary stage, would consider expanded recognition of internally generated intangible assets. As indicated, IFRS permits more recognition of intangibles compared to U.S. GAAP. Thus, it will be challenging to develop converged standards for intangible assets, given the long-standing prohibition on capitalizing intangible assets and research and development in U.S. GAAP. Learn more about the timeline for the intangible asset project at the IASB web-site: <http://www.iasb.org/Current+Projects/IASB+Work+Plan.htm>

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 12-1

Patents	54,000	
Cash		54,000
Patent Amortization Expense	5,400	
Patents ($\$54,000 \times 1/10 = \$5,400$)		5,400

BRIEF EXERCISE 12-2

Patents	24,000	
Cash		24,000
Patent Amortization Expense	8,400	
Patents [$(\$43,200 + \$24,000) \times 1/8 = \$8,400$]		8,400

BRIEF EXERCISE 12-3

Trade Name	68,000	
Cash		68,000
Trade Name Amortization Expense	8,500	
Trade Name ($\text{€}68,000 \times 1/8 = \text{€}8,500$)		8,500

BRIEF EXERCISE 12-4

Franchise	120,000	
Cash		120,000
Franchise Amortization Expense	11,250	
Franchise ($\$120,000 \times 1/8 \times 9/12 = \$11,250$)		11,250

BRIEF EXERCISE 12-5

Purchase price		£700,000
Fair value of assets	£800,000	
Fair value of liabilities	<u>(200,000)</u>	
Fair value of net assets		<u>(600,000)</u>
Value assigned to goodwill.....		<u>£100,000</u>

BRIEF EXERCISE 12-6

Loss on Impairment	190,000	
Patents (\$300,000 – \$110,000).....		190,000

BRIEF EXERCISE 12-7

Patents [\$130,000 – (\$110,000 – \$11,000)]	31,000	
Recovery of Impairment Loss		31,000

BRIEF EXERCISE 12-8

Because the recoverable amount of the division exceeds the carrying amount of the assets, goodwill is not considered to be impaired. No entry is necessary.

BRIEF EXERCISE 12-9

Loss on Impairment (\$800,000 – \$750,000).....	50,000	
Goodwill		50,000

The recoverable amount of the reporting unit (\$750,000) is less than the carrying value (\$800,000)—an impairment has occurred. The loss is the difference between the recoverable amount and the carrying value.

BRIEF EXERCISE 12-10

Organization Cost Expense	60,000,000	
Cash		60,000,000

BRIEF EXERCISE 12-11

Capitalized Costs.....	75,000	
Research and Development Expense.....	430,000	
Cash		505,000

BRIEF EXERCISE 12-12

- (a) Capitalize
- (b) Expense
- (c) Capitalize
- (d) Expense
- (e) Expense

BRIEF EXERCISE 12-13

	<u>Carrying Amount</u>	<u>Life in Months</u>	<u>Amortization Per Month</u>	<u>Months Amortization</u>
Patent (1/1/10)	\$288,000	96	\$3,000	12
Legal costs (12/1/10)	<u>85,000</u>	85	\$1,000	1
	<u>\$373,000</u>			

Carrying amount.....	\$373,000
Less: Amortization of patent (12 X \$3,000)	(36,000)
Legal costs amortization (1 X \$1,000).....	<u>(1,000)</u>
Carrying amount 12/31/10	<u>\$336,000</u>

BRIEF EXERCISE 12-14

Copyright No. 1 for \$9,900 should be expensed and therefore not reported on the statement of financial position.

Copyright No. 2 for \$24,000 should be capitalized. Because the useful life is indefinite, copyright No. 2 should be tested at least annually for impairment using a recoverable amount test. It would be reflected on the December 31, 2010 statement of financial position at its cost of \$24,000.

SOLUTIONS TO EXERCISES

EXERCISE 12-1 (15–20 minutes)

(a) 10, 13, 15, 16, 17, 19, 23

- (b)
1. Long-term investments in the statement of financial position.
 2. Property, plant, and equipment in the statement of financial position.
 3. Research and development expense in the income statement.
 4. Current asset (prepaid rent) in the statement of financial position.
 5. Property, plant, and equipment in the statement of financial position.
 6. Research and development expense in the income statement.
 7. Charge as expense in the income statement.
 8. Operating losses in the income statement.
 9. Charge as expense in the income statement.
 11. Not recorded; any costs related to creating goodwill incurred internally must be expensed.
 12. Research and development expense in the income statement.
 14. Research and development expense in the income statement.
 18. Research and development expense in the income statement.
 20. Intangible asset in the statement of financial position.
 21. Long-term investments, or other assets, in the statement of financial position.
 22. Expensed in the income statement.

EXERCISE 12-2 (10–15 minutes)

The following items would be classified as an intangible asset:

Cable television franchises	Film contract rights
Music copyrights	Customer lists
Goodwill	Covenants not to compete
Internet domain name	Brand names

Cash, accounts receivable, notes receivable, and prepaid expenses would be classified as current assets.

Property, plant, and equipment, and land would be classified as non-current assets in the property, plant, and equipment section.

EXERCISE 12-2 (Continued)

Investments in associated companies would be classified as part of the investments section of the statement of financial position.

Research and development costs would be classified as an operating expense.

Notes payable is shown as a liability on the statement of financial position.

Organization costs are start-up costs and should be expensed as incurred.

EXERCISE 12-3 (10–15 minutes)

(a)	Trademarks	€20,000
	Excess of cost over fair value of net identifiable assets of acquired subsidiary (goodwill)	<u>75,000</u>
	Total intangible assets	<u>€95,000</u>

(b) Organization costs, €24,000, should be expensed.

Bonds payable, €35,000, should be reported in the non-current liabilities section.

Deposits with advertising agency for ads to promote goodwill of company, €10,000, should be reported either as an expense or as prepaid advertising in the current assets section. Advertising costs in general are expensed when incurred or when first used.

Cost of equipment acquired for research and development projects, €90,000, should be reported with property, plant, and equipment, because the equipment has an alternative use.

Costs of developing a secret formula for a product that is expected to be marketed for at least 20 years, €70,000, should be classified as research and development expense on the income statement.

EXERCISE 12-4 (15–20 minutes)

1. Palmiero should report the patent at \$900,000 (net of \$600,000 accumulated amortization) on the statement of financial position. The computation of accumulated amortization is as follows.

Amortization for 2008 and 2009 ($\$1,500,000/10$) X 2.....	\$300,000
2010 amortization: $(\$1,500,000 - \$300,000) \div (6 - 2)$	<u>300,000</u>
Accumulated amortization, 12/31/10	<u>\$600,000</u>

2. Palmiero should amortize the franchise over its estimated useful life. Because it is uncertain that Palmiero will be able to retain the franchise at the end of 2018, it should be amortized over 10 years. The amount of amortization on the franchise for the year ended December 31, 2010, is \$35,000: $(\$350,000/10)$.
3. These costs should be expensed as incurred. Therefore \$275,000 of organization expense were reported in income for 2008.
4. Because the license can be easily renewed (at nominal cost), it has an indefinite life. Thus, no amortization will be recorded. The license will be tested for impairment in future periods.

EXERCISE 12-5 (15–20 minutes)

Research and Development Expense.....	940,000	
Patents	75,000	
Rent Expense $[(5 \div 7) \times \$91,000]$	65,000	
Prepaid Rent $[(2 \div 7) \times \$91,000]$	26,000	
Advertising Expense	207,000	
Income Summary (or a loss account).....	141,000	
Bonds Payable	82,950*	
Interest Expense	1,050	
Share Premium—Ordinary		250,000
Intangible Assets.....		<u>1,288,000</u>

* $84,000 \div 240 \text{ months} = \350 ; $\$350 \times 3 = \$1,050$; $\$84,000 - \$1,050 = \$82,950$

Patent Amortization Expense $[(\$75,000 \div 12) \times 1/2]$	3,125	
Patents (or Accumulated Amortization).....		<u>3,125</u>

EXERCISE 12-6 (15–20 minutes)

Patents.....	435,000	
Goodwill	360,000	
Franchise	450,000	
Copyright	156,000	
Research and Development Expense (£215,000 – £55,000).....	160,000	
Intangible Assets.....		1,561,000
Amortization Expense	85,500	
Patents (£380,000/8) + (£55,000 X 4/88).....		50,000
Franchise (£450,000/10 X 6/12)		22,500
Copyright (£156,000/5 X 5/12).....		13,000

Balance of Intangible Assets as of December 31, 2010

Patents	=	£435,000 – £50,000 = £385,000
Goodwill	=	£360,000 (no amortization)
Franchise	=	£450,000 – £22,500 = £427,500
Copyright	=	£156,000 – £13,000 = £143,000

EXERCISE 12-7 (10–15 minutes)

- (a) 2009 amortization: $\$18,000 \div 10 = \$1,800$.
 12/31/09 book value: $\$18,000 - \$1,800 = \$16,200$.
- 2010 amortization: $(\$16,200 + \$7,800) \div 9 = \$2,667$.
 12/31/10 book value: $(\$16,200 + \$7,800 - \$2,667) = \$21,333$.
- (b) 2010 amortization: $(\$16,200 + \$7,800) \div 4 = \$6,000$.
 12/31/10 book value: $\$16,200 + \$7,800 - \$6,000 = \$18,000$.
- (c) Carrying amount ($\$21,333$) > recoverable amount ($\$16,000$); thus, there is an impairment. The new carrying value is $\$16,000$ —the trade name’s recoverable amount.

2011 amortization (after recording impairment loss):

$$\$16,000 \div 8 = \$2,000.$$

$$12/31/11 \text{ book value: } \$16,000 - \$2,000 = \$14,000.$$

EXERCISE 12-8 (10–15 minutes)

(a) Attorney's fees in connection with organization of the company	\$17,000
Costs of meetings of incorporators to discuss organizational activities.....	7,000
State filing fees to incorporate.....	<u>1,000</u>
Total organization costs.....	<u>\$25,000</u>

Drafting and design equipment, \$10,000, should be classified as part of fixed assets, rather than as organization costs.

(b) Organization Cost Expense	25,000	
Cash (Payables)		25,000

EXERCISE 12-9 (15–20 minutes)

(a) **DEVON HARRIS COMPANY**
Intangibles Section of Statement of Financial Position
December 31, 2010

Patent from Bradtke Company, net of accumulated amortization of \$700,000 (Schedule 1).....	\$1,800,000
Franchise from Greene Company, net of accumulated amortization of \$58,000 (Schedule 2)	<u>522,000</u>
Total intangibles	<u>\$2,322,000</u>

Schedule 1 Computation of Patent from Bradtke Company

Cost of patent at date of purchase	\$2,500,000
Amortization of patent for 2009 ($\$2,500,000 \div 10$ years)	<u>(250,000)</u>
	2,250,000
Amortization of patent for 2010 ($\$2,250,000 \div 5$ years).....	<u>(450,000)</u>
Patent balance	<u>\$1,800,000</u>

Schedule 2 Computation of Franchise from Greene Company

Cost of franchise at date of purchase	\$ 580,000
Amortization of franchise for 2010 ($\$580,000 \div 10$).....	<u>(58,000)</u>
Franchise balance	<u>\$ 522,000</u>

EXERCISE 12-9 (Continued)

**(b) DEVON HARRIS COMPANY
Income Statement Effect
For the Year Ended December 31, 2010**

Patent from Bradtke Company:		
Amortization of patent for 2010		
(\$2,250,000 ÷ 5 years).....		\$ 450,000
Franchise from Greene Company:		
Amortization of franchise for 2010		
(\$580,000 ÷ 10).....	\$ 58,000	
Payment to Greene Company		
(\$2,500,000 X 5%).....	<u>125,000</u>	183,000
Research and development costs		<u>433,000</u>
Total charged against income		<u>\$1,066,000</u>

EXERCISE 12-10 (15–20 minutes)

(a)	2007	Research and Development Expense	170,000	
		Cash		170,000
		Patents	24,000	
		Cash		24,000
		Patent Amortization Expense	600	
		Patents [(\$24,000 ÷ 10) X 3/12]		600
	2008	Patent Amortization Expense	2,400	
		Patents (\$24,000 ÷ 10)		2,400

EXERCISE 12-10 (Continued)

(b)	2009	Patents	12,400	
		Cash		12,400
		Patent Amortization Expense	2,575	
		Patents (\$1,000 + \$1,575)		2,575
		[Jan. 1–June 1: (\$24,000 ÷ 10) X		
		5/12 = \$1,000		
		June 1–Dec. 31: (\$24,000 – \$600 –		
		\$2,400 – \$1,000 + \$12,400) = \$32,400;		
		(\$32,400 ÷ 12) X 7/12 = \$1,575]		
	2010	Patent Amortization Expense	2,700	
		Patents (\$32,400 ÷ 12).....		2,700
(c)	2011 and 2012	Patent Amortization Expense	14,063	
		Patents (\$28,125 ÷ 2)		14,063
		(\$32,400 – \$1,575 – \$2,700) = \$28,125		

EXERCISE 12-11 (20–25 minutes)

(a)	<u>Patent A</u>	
	Life in years	17
	Life in months (12 X 17).....	204
	Amortization per month (W 40,800 ÷ 204)	W 200
	Number of months amortized to date	
	<u>Year</u>	<u>Month</u>
	2006	10
	2007	12
	2008	12
	2009	<u>12</u>
		<u>46</u>

Book value 12/31/09 ~~W~~31,600: (~~W~~40,800 – [46 X ~~W~~200])

EXERCISE 12-11 (Continued)

Patent B

Life in years.....	10
Life in months (12 X 10)	120
Amortization per month (W 15,000 ÷ 120)	W 125
Number of months amortized to date	

<u>Year</u>	<u>Month</u>
2007	6
2008	12
2009	<u>12</u>
	<u>30</u>

Book value 12/31/09 ~~W~~11,250: (~~W~~15,000 – [~~W~~125 X 30])

Patent C

Life in years.....	4
Life in months (12 X 4).....	48
Amortization per month (W 14,400 ÷ 48)	W 300
Number of months amortized to date	

<u>Year</u>	<u>Month</u>
2008	4
2009	<u>12</u>
	<u>16</u>

Book value 12/31/09 ~~W~~9,600: (~~W~~14,400 – [~~W~~300 X 16])

At December 31, 2009

Patent A	W 31,600
Patent B	11,250
Patent C	<u>9,600</u>
Total.....	<u><u>W</u>52,450</u>

EXERCISE 12-11 (Continued)

(b) Analysis of 2010 transactions

1. The ~~₩217,700~~ incurred for research and development should be expensed.
2. The book value of Patent B is ~~₩11,250~~ and its recoverable amount is ~~₩5,154~~; therefore Patent B is impaired. The impairment loss is computed as follows:

Book value	₩11,250
Less: Present value of future	
cash flows (₩2,000 X 2.57710).....	<u>5,154</u>
Loss recognized	<u>₩ 6,096</u>

Patent B carrying amount (12/31/10) ~~₩5,154~~

At December 31, 2010

Patent A	₩29,200	(₩31,600 – [12 X ₩200])
Patent B	5,154	(Present value of future cash flows)
Patent C	26,000	(₩9,600 + ₩28,000 – [(12 X ₩300) + (₩1,000* X 8)])
Patent D	<u>27,000</u>	(₩28,500 – ₩1,500**)
Total	<u>₩87,354</u>	

*(~~₩28,000~~ ÷ 28 mon.)

****Patent D amortization**

Life in years	9 1/2
Life in months	114
Amortization per month (₩28,500 ÷ 114)	₩250
₩250 X 6 = ₩1,500	

EXERCISE 12-12 (20–25 minutes)

Net assets of Terrell as reported		\$225,000
Adjustments to fair value		
Increase in land value	50,000	
Decrease in equipment value	<u>(5,000)</u>	<u>45,000</u>
Net assets of Terrell at fair value		(270,000)
Selling price		<u>380,000</u>
Amount of goodwill to be recorded		<u>\$110,000</u>

The journal entry to record this transaction is as follows:

Building	200,000	
Equipment	170,000	
Copyright	30,000	
Land	120,000	
Cash	100,000	
Goodwill	110,000	
Accounts Payable		50,000
Long-term Notes Payable		300,000
Cash		380,000

EXERCISE 12-13 (10–15 minutes)

(a) Buildings	75,000	
Equipment	70,000	
Trademarks	15,000	
Land	80,000	
Inventory	125,000	
Receivables	90,000	
Cash	50,000	
Goodwill	95,000*	
Accounts Payable		200,000
Notes Payable		150,000
Cash		250,000

*\$400,000 – [\$235,000 + \$40,000 + \$25,000 + \$5,000]

Note that the building and equipment would be recorded at the 7/1/10 cost to Brandon; accumulated depreciation accounts would not be recorded.

EXERCISE 12-13 (Continued)

(b)	Trademark Amortization Expense	1,500	
	Trademarks ($[\$15,000 - \$3,000] \times 1/4 \times 6/12$)		1,500

EXERCISE 12-14 (15–20 minutes)

(a)	December 31, 2010		
	Loss on Impairment.....	900,000*	
	Copyrights.....		900,000
	*Carrying amount	\$4,300,000	
	Recoverable amount.....	<u>(3,400,000)</u>	
	Loss on impairment	<u>\$ 900,000</u>	
(b)	Copyright Amortization Expense	340,000*	
	Copyrights.....		340,000
	*New carrying amount	\$3,400,000	
	Useful life	<u>÷ 10 years</u>	
	Amortization per year	<u>\$ 340,000</u>	
(c)	Copyright (\$3,500,000) – (\$3,400,000 – \$340,000) ..	440,000	
	Recovery of Impairment Loss.....		440,000

EXERCISE 12-15 (15–20 minutes)

(a)	December 31, 2010		
	Loss on Impairment.....	25,000,000	
	Goodwill.....		25,000,000

The recoverable amount of the reporting unit (\$335 million) is below its carrying value (\$360 million). Therefore, an impairment has occurred. To determine the impairment amount, we compare recoverable amount to the carrying value of the goodwill to determine the amount of the impairment to record.

EXERCISE 12-15 (Continued)

Fair value of division.....	\$335,000,000
Carrying amount of division, net of goodwill	<u>(160,000,000)</u>
Implied value of goodwill.....	175,000,000
Carrying value of goodwill	<u>(200,000,000)</u>
Loss on impairment	<u>\$ 25,000,000</u>

- (b) No entry necessary. After a goodwill impairment loss is recognized, the adjusted carrying amount of the goodwill is its new accounting basis. Subsequent reversal of previously recognized goodwill impairment losses is not permitted under IFRS.

EXERCISE 12-16 (15–20 minutes)

- (a) In accordance with IFRS, the €325,000 is a research and development cost that should be charged to R&D Expense and, if not separately disclosed in the income statement, the total cost of R&D should be separately disclosed in the notes to the financial statements.

(b) Patents.....	36,000	
Research and Development Expense	94,000	
Cash, Accts. Payable, etc.....		130,000
(To record research and development costs)		
Patents.....	24,000	
Cash, Accts. Payable, etc.....		24,000
(To record legal and administrative costs incurred to obtain patent #472-1001-84)		
Patent Amortization Expense	12,000	
Patents		12,000
[To record one year's amortization expense (€60,000 ÷ 5 = €12,000)]		

EXERCISE 12-16 (Continued)

(c)	Patents	47,200	
	Cash, Accts. Payable, etc.		47,200
	(To record legal cost of successfully defending patent)		

The cost of defending the patent is capitalized because the defense was successful and because it extended the useful life of the patent.

Patent Amortization Expense	11,900	
Patents.....		11,900

(To record one year's amortization Expense:

€60,000 – €12,000 = €48,000;

€48,000 ÷ 8 = € 6,000

€47,200 ÷ 8 = 5,900

Amortization expense for 2011 €11,900

Or

Carrying value after 1 year €48,000

Cost to defend 47,200

€95,200

Expense: €95,200 ÷ 8 = €11,900

(d) Additional engineering and consulting costs required to advance the design of a product to the manufacturing stage are R&D costs. As indicated in the chapter it is R&D because it translates knowledge into a plan or design for a new product.

EXERCISE 12-17 (10–15 minutes)

Depreciation of equipment acquired that will have alternate uses in future R&D projects over the next 5 years ($\\$330,000 \div 5$).....	\$ 66,000
Materials consumed in R&D projects.....	59,000
Consulting fees paid to outsiders for R&D projects	100,000
Personnel costs of persons involved in R&D projects	128,000
Indirect costs reasonably allocable to R&D projects	<u>50,000</u>
 Total to be expensed in 2010 for research and development	<u>\$403,000*</u>

***Materials purchased for future R&D projects should be reported as an asset.**

TIME AND PURPOSE OF PROBLEMS

Problem 12-1 (Time 15–20 minutes)

Purpose—to provide the student with an opportunity to appropriately reclassify amounts charged to a single intangible asset account. Capitalized in the account are amounts representing franchise costs, prepaid rent, organization fees, prior net loss, patents, goodwill, and R&D costs. The student must also be alert to the fact that several transactions require that an adjustment of Retained Earnings be made. The problem provides a good summary of accounting for intangibles.

Problem 12-2 (Time 20–30 minutes)

Purpose—to provide the student with an opportunity to compute the carrying value of a patent at three statement of financial position dates. The student must distinguish between expenditures that are properly included in the patent account and R&D costs which must be expensed as incurred. Computation of amortization is slightly complicated by additions to the account and a change in the estimated useful life of the patents. A good summary of accounting for patents and R&D costs.

Problem 12-3 (Time 20–30 minutes)

Purpose—to provide the student the opportunity to determine the cost and amortization of a franchise, patent, and trademark and to show how they are disclosed on the statement of financial position. The student prepares a schedule of expenses resulting from the intangibles transactions.

Problem 12-4 (Time 15–20 minutes)

Purpose—to provide the student with an opportunity to determine income statement and statement of financial position presentation for costs related to research and development of patents. The problem calls on the student to determine whether costs incurred are properly capitalized or expensed. The problem addresses the basic issues involved in accounting for R&D costs and patents.

Problem 12-5 (Time 25–30 minutes)

Purpose—to provide the student with an opportunity to determine the amount of goodwill in a business combination and to determine the goodwill impairment.

Problem 12-6 (Time 30–35 minutes)

Purpose—to provide the student with an opportunity to determine carrying value of intangible assets (limited life, indefinite life, and goodwill) at two statement of financial position dates. The problem also requires students to determine impairments, if necessary on the intangible assets.

SOLUTIONS TO PROBLEMS

PROBLEM 12-1

Franchises	48,000	
Prepaid Rent	24,000	
Retained Earnings (Organization Costs of \$6,000 in 2009)	6,000	
Retained Earnings (\$16,000 – \$6,000)	10,000	
Patents (\$84,000 + \$12,650 + \$45,000).....	141,650	
Research and Development Expense (\$75,000 + \$160,000 – \$45,000)	190,000	
Goodwill	278,400	
Intangible Assets.....		698,050
Franchise Amortization Expense ($\$48,000 \div 8$).....	6,000	
Retained Earnings ($\$48,000 \div 8 \times 6/12$)	3,000	
Franchises		9,000
Rent Expense ($\$24,000 \div 2$)	12,000	
Retained Earnings ($\$24,000 \div 2 \times 3/12$)	3,000	
Prepaid Rent		15,000
Patent Amortization Expense	10,777	
Patents ($\$84,000 \div 10$) + ($\$12,650 \times 7/115$) + ($\$45,000 \times 4/112$)		10,777

Note: No amortization of goodwill; goodwill should be tested for impairment on at least an annual basis in future periods.

PROBLEM 12-2

(a)	Costs to obtain patent Jan. 2004.....		\$59,500
	2004 amortization ($\$59,500 \div 17$).....		<u>(3,500)</u>
	Carrying value, 12/31/04		<u>\$56,000</u>

All costs incurred prior to January 2004 are related to research and development activities and were expensed as incurred in accordance with IFRS.

(b)	1/1/05 carrying value of patent.....		\$ 56,000
	2005 amortization ($\$59,500 \div 17$).....	\$3,500	
	2006 amortization	<u>3,500</u>	<u>(7,000)</u>
			49,000
	Legal fees to defend patent 12/06		<u>42,000</u>
	Carrying value, 12/31/06		91,000
	Capitalized research costs 5/07.....		49,000
	2007 amortization ($\$91,000 \div 14$) + (\$49,000 \div 14).....	10,000	
	2008 amortization ($\$91,000 \div 14$) + (\$49,000 \div 14).....	<u>10,000</u>	<u>(20,000)</u>
	Carrying value, 12/31/08		<u>\$120,000</u>

The costs incurred in 2005 are related to research and development activities and are expensed as incurred.

(c)	1/1/09 carrying value		\$120,000
	2009 amortization ($\$120,000 \div 5$).....	\$24,000	
	2010 amortization	24,000	
	2011 amortization	<u>24,000</u>	<u>(72,000)</u>
	Carrying value, 12/31/11		<u>\$ 48,000</u>

The legal costs in 2011 were expensed because the suit was unsuccessful.

PROBLEM 12-3

(a) SANDRO CORPORATION
Intangible Assets
December 31, 2010

<hr/>		
Franchise, net of accumulated amortization of \$5,870		
(Schedule 1)	\$ 52,830	
Patent, net of accumulated amortization of \$2,200		
(Schedule 2)	15,400	
Trademark, net of accumulated amortization of \$6,600		
(Schedule 3)	<u>39,600</u>	
Total intangible assets	<u>\$107,830</u>	
<u>Schedule 1</u>	<u>Franchise</u>	
Cost of franchise on 1/1/10 (\$15,000 + \$43,700)		\$ 58,700
2010 amortization (\$58,700 X 1/10)		<u>(5,870)</u>
Cost of franchise, net of amortization		<u>\$ 52,830</u>
<u>Schedule 2</u>	<u>Patent</u>	
Cost of securing patent on 1/2/10		\$ 17,600
2010 amortization (\$17,600 X 1/8)		<u>(2,200)</u>
Cost of patent, net of amortization		<u>\$ 15,400</u>
<u>Schedule 3</u>	<u>Trademark</u>	
Cost of trademark on 7/1/07		\$ 36,000
Amortization, 7/1/07 to 7/1/10 (\$36,000 X 3/20)		<u>(5,400)</u>
Book value on 7/1/10		30,600
Cost of successful legal defense on 7/1/10		<u>10,200</u>
Book value after legal defense		40,800
Amortization, 7/1/10 to 12/31/10 (\$40,800 X 1/17 X 6/12)		<u>(1,200)</u>
Cost of trademark, net of amortization		<u>\$ 39,600</u>

PROBLEM 12-3 (Continued)

(b) SANDRO CORPORATION
Expenses Resulting from Selected Intangible Assets Transactions
For the Year Ended December 31, 2010

Interest expense ($\$43,700 \times 14\%$).....	\$ 6,118
Franchise amortization (Schedule 1)	5,870
Franchise fee ($\$900,000 \times 5\%$).....	45,000
Patent amortization (Schedule 2)	2,200
Trademark amortization (Schedule 4).....	<u>2,100</u>
Total intangible assets	<u>\$61,288</u>

Note: The \$65,000 of research and development costs incurred in developing the patent would have been expensed prior to 2010.

<u>Schedule 4</u>	<u>Trademark Amortization</u>	
Amortization, 1/1/10 to 6/30/10 ($\$36,000 \times 1/20 \times 6/12$).....		\$ 900
Amortization, 7/1/10 to 12/31/10 ($\$40,800 \times 1/17 \times 6/12$).....		<u>1,200</u>
Total trademark amortization		<u>\$2,100</u>

PROBLEM 12-4

(a) **Income statement items and amounts for the year ended December 31, 2010:**

Research and development expenses*	\$148,000
Amortization of patent ($\$88,000 \div 10$ years).....	8,800

*The research and development expenses could be listed by the components rather than in one total. The detail of the research and development expenses are as follows:

Depreciation—building ($\$320,000 \div 20$ years)	\$ 16,000
Salaries and employee benefits ($\$195,000 - \$90,000$)	105,000
Other expenses ($\$77,000 - \$50,000$)	27,000

(b) **Statement of financial position items and amounts as of December 31, 2010:**

Land	\$ 60,000
Building (net of accumulated depreciation of \$16,000)	304,000
Patent (net of amortization of \$15,400)*	72,600
Capitalized development costs ($\$90,000 + \$50,000$).....	140,000

*($[\$88,000 \div 10] \times 3/4$) + ($\$88,000 \div 10$)

All research and development costs incurred on abandoned projects and projects in process should be charged to expense when incurred. The research and development costs incurred on completed projects with long-term benefits are recorded as Capitalized development costs.

The patent was acquired for manufacturing rights rather than for use in research and development activities. Consequently, the cost of the patent can be capitalized as an intangible asset and amortized over its useful life.

PROBLEM 12-5

- (a) **Goodwill = Excess of the cost of the division over the fair value of the identifiable assets:**

$$\$3,000,000 - \$2,750,000 = \$250,000$$

- (b) **No impairment loss is recorded, because the recoverable amount of Conchita (\$1,850,000) is greater than carrying value of the net assets (\$1,650,000).**

- (c) **Computation of impairment:**

Goodwill impairment = Recoverable amount of division less the carrying value of the division (adjusted for fair value changes), net of goodwill:

Recoverable amount of Conchita division.....	\$1,600,000
Carrying value of division	<u>1,800,000</u>
Impairment loss	<u>(\$ 200,000)</u>

- | | | |
|------------------------------------|------------------|----------------|
| (d) Loss on Impairment..... | \$200,000 | |
| Goodwill..... | | 200,000 |

This loss will be reported in income as a separate line item before the subtotal “income from continuing operations.”

PROBLEM 12-6

(a) **MONTANA MATT'S GOLF INC.**
Intangibles Section of Statement of Financial Position
December 31, 2009

Trade name	£ 10,000
Copyright (net accumulated amortization of £300) (Schedule 1)	23,700
Goodwill (Schedule 2)	<u>170,000</u>
Total intangibles	<u>£203,700</u>
 Schedule 1 Computation of Value of Old Master Copyright	
Cost of copyright at date of purchase	£ 24,000
Amortization of Copyright for 2009 [(£24,000 ÷ 40) X 1/2 year]	<u>(300)</u>
Cost of copyright at December 31	<u>£ 23,700</u>
 Schedule 2 Goodwill Measurement	
Purchase price	£770,000
Fair value of assets	£800,000
Fair value of liabilities	<u>(200,000)</u>
Fair value of net assets	<u>(600,000)</u>
Value assigned to goodwill	<u>£170,000</u>

Amortization expense for 2009 is £300 (see Schedule 1). There is no amortization for the goodwill or the trade name, both of which are considered indefinite life intangible assets.

(b) Copyright Amortization Expense	600
Copyright (£24,000 ÷ 40)	600

There is a full year of amortization on the Copyright. There is no amortization for the goodwill or the trade name, which is considered an indefinite life intangible.

PROBLEM 12-6 (Continued)

MONTANA MATT'S GOLF INC.
Intangibles Section of Statement of Financial Position
December 31, 2010

Trade name	£ 10,000
Copyright (net accumulated amortization of £900) (Schedule 1)	23,100
Goodwill	170,000
Total intangibles.....	<u>£203,100</u>

Schedule 1 Computation of Value of Old Master Copyright

Cost of Copyright at date of purchase	£ 24,000
Amortization of Copyright for 2009, 2010 [(£24,000 ÷ 40) X 1.5 years]	(900)
Cost of copyright at December 31.....	<u>£ 23,100</u>

(c) Loss on Impairment	87,000	
Goodwill.....		80,000*
Trade name (£10,000 – £3,000).....		7,000

***Recoverable amount of Old Master**

reporting unit.....	£420,000
Carry value of the reporting unit	(500,000)
Impairment	<u>£ 80,000</u>

The Goodwill is considered impaired because the recoverable amount of the business unit (£420,000) is less than its carrying value (£500,000). The copyright is not considered impaired because the expected net future cash flows (£30,000) exceed the carrying amount (£24,000).

TIME AND PURPOSE OF CONCEPTS FOR ANALYSIS

CA 12-1 (Time 15–20 minutes)

Purpose—to provide the student with an opportunity to determine which development costs are expensed and which are capitalized. The student is required to discuss how the accounting for development costs impacts a company’s income statement and statement of financial position. Finally, the student must identify the criteria for determining “economic viability”.

CA 12-2 (Time 20–25 minutes)

Purpose—to provide the student with an opportunity to determine the proper classification of certain expenditures related to organizing a business. The student is required to deal with such issues as costs incurred for interest expense during construction, the cost of promotional advertising, and expenditures related to obtaining tenants for a shopping center. Classification of these items is complicated due to a postponement in the starting of business operations. A challenging and interesting case which should provide good background for a discussion of the theoretical support for capitalizing organization costs.

CA 12-3 (Time 25–30 minutes)

Purpose—to present an opportunity for the student to discuss accounting for patents from a theoretical and a practical viewpoint. The student is required to explain the “discounted value of expected net receipts” method of accounting for patents and to provide support for using cost as the generally accepted valuation method. The student is also required to comment on the theoretical basis of patent amortization. Finally the student must determine proper disclosure in the financial statements for a patent infringement suit which is in progress at the statement of financial position date. This case challenges the student to present theoretical support and practical application beyond that presented in the text.

CA 12-4 (Time 25–30 minutes)

Purpose—to provide the student with an opportunity to discuss the theoretical support for and practical applications of the IASB’s position on research and development costs. The student is required to define the terms “research” and “development” as used by the IASB, to provide theoretical support for the IASB’s position, and to apply the provisions to a situation presented in the case. A good case to thoroughly cover research and development costs.

CA 12-5 (Time 20–25 minutes)

Purpose—to provide the student with an opportunity to examine the ethical issues related to expensing research and development costs.

SOLUTIONS TO CONCEPTS FOR ANALYSIS

CA 12-1

(a) Research and Development Costs

	Research and Development Expense	Capitalized Patent
Dogwood incurred legal and processing fees to file and record a patent for the technology		€10,000
Laboratory and materials fees to identify a working system.....	€23,000	
Prototype development and testing	34,000	
Final development of product based on earlier tests.....		<u>45,000</u>
Total expense/cost	<u>€57,000</u>	<u>€55,000</u>

As indicated, Dogwood records as Research and Development Expense all costs incurred in the project prior to meeting the economic viability criteria (€57,000).

- (b) By capitalizing the €45,000 final development costs, Dogwood's current period income and intangible assets are higher. In future periods, Dogwood's income and intangible assets will decrease by the amount of amortization recorded on the capitalized costs (€45,000).
- (c) Economic viability indicates that a project is far enough along in the process such that the economic benefits of the R&D project will flow to the company.

CA 12-2

Interest on mortgage bonds. An amount equal to the interest cost incurred in 2009 (\$720,000) is a cost which can be associated with the normal construction period and can be regarded as a normal element of the cost of the physical assets of the shopping center because the construction period would have ended at the end of the year if the tornado had not occurred. The decision to use debt capital to finance the shopping center was made with full knowledge that interest would accrue during the construction period and add to the total cost of building the center, bringing it to the point at which it would produce revenue. The future income to be generated by the shopping center must have been estimated to be more than sufficient to recover all of the expected costs of building the center and preparing it for occupancy, including interest during the construction period.

In lieu of treating interest during construction as an element of the cost of the physical assets, it can be argued that it represents an element of the general cost of bringing the business to the point of revenue production and should therefore be treated as an organization expense. This view regards interest during construction as just another of the many expenditures that are necessary to acquire and organize the physical assets of a new business but do not attach to any specific assets.

Note that interest must be capitalized in this situation (see chapter 10) because the building requires a period of time to get it ready for its intended use.

CA 12-2 (Continued)

The amount of interest cost for the first nine months of 2010 is the measure of the 2010 loss resulting from the tornado. The extension of the construction period to October 2010 because of the tornado does not warrant its capitalization as construction period interest. It is in effect an uninsured loss resulting from the tornado. Had it not been for the tornado, the entire amount would have been a normal operating expense chargeable against the rental revenue that would have been earned during the first nine months of 2010.

Cost of obtaining tenants. Both the 2009 and 2010 costs of obtaining tenants should be expensed as incurred. The cost of obtaining tenants is a start-up cost. The accounting for start-up costs is straightforward—expense these costs as incurred. The profession recognizes that these costs are incurred with the expectation that future revenues will occur or increased efficiencies will result. However, to determine the amount and timing of future benefits is so difficult that a conservative approach—expense these costs as incurred—is required.

Promotional advertising. The profession has concluded that, except in limited situations, future benefits from advertising are not sufficiently defined or measurable with a degree of reliability that is required to recognize these costs as an asset. As a result, the costs should be expensed as incurred or the first time the advertising takes place. The advertising costs incurred in 2010 might be reported as a loss to indicate that an unusual event caused this additional expense.

CA 12-3

- (a) A dollar to be received in the future is worth less than a dollar received today because of an interest or discount factor—often referred to as the time value of money. The discounted value of the expected royalty receipts can be thought of either in terms of the present value of an annuity of 1 or in terms of the sum of several present values of 1.
- (b) If the royalty receipts are expected to occur at regular intervals and the amounts are to be fairly constant, their discounted value can be calculated by multiplying the value of one such receipt by the present value of an annuity of 1 for the number of periods the receipts are expected. On the other hand, if receipts are expected to be irregular in amount or if they are to occur at irregular intervals, each expected future receipt would have to be multiplied by the present value of 1 for the number of periods of delay expected. In each case some interest rate (discount factor) per period must be assumed and used. As an example, if receipts of \$10,000 are expected each six months over the next ten years and an 8% annual interest rate is selected, the present value of the twenty \$10,000 payments is equal to \$10,000 times the present value of an annuity of 1 for 20 periods at 4%. Twice as many periods as years and half the annual interest rate of 8% are used because the payments are expected at semiannual intervals. Thus the discounted (present) value of these receipts is \$135,903 ($\$10,000 \times 13.5903$). Because of the interest rate, this discounted value is considerably less than the total expected collection of \$200,000. Continuing the example, if instead it is expected that \$10,000 will be received six months hence, \$20,000 one year from now, and a terminal payment of \$15,000 is expected 18 months hence, the calculation is as follows:

$$\$10,000 \times \text{present value of 1 at 4\% for 1 period} = \$10,000 \times .96154 = \$9,615.$$

$$\$20,000 \times \text{present value of 1 at 4\% for 2 periods} = \$20,000 \times .92456 = \$18,491.$$

$$\$15,000 \times \text{present value of 1 at 4\% for 3 periods} = \$15,000 \times .88900 = \$13,335.$$

Adding the results of these three calculations yields a total of \$41,441 (rounded), considerably less than the \$45,000 total collections, again due to the discount factor.

CA 12-3 (Continued)

- (c) The basis of valuation for patents that is generally accepted in accounting is cost. Evidently the cartons were developed and the patents obtained directly by the client corporation. Those costs related to the research and development (prior to achieving economic viability) of the cartons must be expensed in accordance with **IFRS**. Any development costs incurred after achieving economic viability should be capitalized. If the infringement suit is unsuccessful, an evaluation of the value of the patent should be made to ascertain the reasonableness of carrying forward the patent cost. If the suit is successful, the attorney's fees and other costs of protecting the patent should be capitalized and amortized over its remaining useful or legal life, whichever is shorter.
- (d) Intangible assets represent rights to future benefits. The ideal measure of the value of intangible assets is the discounted present value of their future benefits. For Ferry Company, this would include the discounted value of expected net receipts from royalties, as suggested by the financial vice-president, as well as the discounted value of the expected net receipts to be derived from Ferry Company's production. Other valuation bases that have been suggested are current cash equivalent or fair value.
- (e) The amortization policy is implied in the definition of intangible assets as rights to future benefits. As the benefits are received by the firm, the cost or other value should be charged to expense or to inventory to provide a proper matching of revenues and expenses. Under the discounted value approach, the periodic amortization would be the decline during the year in the present value of expected net receipts. In practice, generally straight-line amortization is used because it is simple and provides a uniform amortization approach.
- (f) The litigation can and should be mentioned in notes to the financial statements. Some indication of the expectations of legal counsel in respect to the outcome can properly accompany the statements. It would be inappropriate to record a contingent asset reflecting the expected damages to be recovered. Costs incurred to September 30, 2010, in connection with the litigation should be carried forward and charged to expense (or to loss if the cases are lost) as royalties (or damages) are collected from the parties against whom the litigation has been instituted; however, the conventional treatment would be to charge these costs as ordinary legal expenses. If the final outcome of the litigation is successful, the costs of prosecuting it should be capitalized. Similarly, if the client were the successful defendant in an infringement suit on these patents, the usual accounting practice would be to add the costs of the legal defense to the Patents account.

Developments between the statement of financial position date and the date that the financial statements are released would properly be reflected in notes to the statements as post-statement of financial position (or subsequent events) disclosure.

CA 12-4

- (a) **Research**, as defined in **IFRS**, is "original and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge and understanding."

Development, as defined in **IFRS**, is "application of research findings or other knowledge to a plan or design for the production of new or substantially improved materials, devices, products, systems or services before the start of commercial production or use."

CA 12-4 (Continued)

- (b) The current accounting and reporting practices for research and development costs (incurred before achieving economic viability) were promulgated by the IASB in order to reduce the number of alternatives that previously existed and to provide useful financial information about research and development costs. The IASB considered four alternative methods of accounting: (1) charge all costs to expense when incurred, (2) capitalize all costs when incurred, (3) selective capitalization, and (4) accumulate all costs in a special category until the existence of future benefits can be determined. The IASB concluded that all research and development costs should be charged to expense as incurred. Accounting for the costs of research and development activities conducted for others under a contractual arrangement is a part of accounting for contracts in general and is addressed in other literature .

In reaching this decision, the IASB considered the three pervasive principles of expense recognition: (1) associating cause and effect, (2) systematic and rational allocation, and (3) immediate recognition. The IASB found little or no evidence of a direct causal relationship between current research and development expenditures and subsequent future benefits. The IASB also stated that the high degree of uncertainty surrounding future benefits, if any, of individual research and development projects make it doubtful that there is any useful purpose to be served by capitalizing the costs and allocating them over future periods. In view of the above, the IASB concluded that the first two principles of expense recognition do not apply, but rather that the “immediate recognition” principle of expense recognition should apply.

The high degree of uncertainty about whether research and development expenditures will provide any future benefits, the lack of objectivity in setting criteria, and the lack of usefulness of the resulting information led the IASB to reject the alternatives of capitalization, selective capitalization, and accumulation of costs in a special category.

- (c) The following costs attributable only to research and development should be expensed as incurred:
- Design and engineering studies.
 - Prototype manufacturing costs.
 - Administrative costs related solely to research and development.
 - The cost of equipment produced solely for development of the product (\$315,000).

The remaining \$585,000 of equipment should be capitalized and shown on the statement of financial position at cost, less accumulated depreciation. The depreciation expense resulting from the current year is a part of research and development expense for the year. The market research direct costs and related administrative expenses are not research and development costs. These costs are treated as period costs and are shown as expense items in the current income statement.

- (d) Economic viability indicates that a project is far enough along in the process such that the economic benefits of the R&D project will flow to the company. Development costs incurred from that point forward meet the recognition criteria and should be recorded as an intangible asset.

CA 12-5

- (a) Investors and creditors are concerned with corporate profits, dividends, and cash flow. Employees in Czeslaw Corporation's R&D department are concerned about job security if the company begins to hire outside firms rather than have work done internally. Reid must be concerned with his performance and reputation within the company as well.
- (b) Ethical issues include long-term versus short-term profits, concern for job security, loyalty to fellow employees, and an efficient operation.
- (c) Reid should do what is best for Czeslaw Corporation in the long run. He should choose to have the project done where the work will be done well and at the lowest cost. Whether expenses will appear in the income statement immediately or will be capitalized and allocated over a period of years should NOT be the driving factor in making the decision. He should be able to explain his decision to higher-ups and illustrate the different required accounting treatments. He also should give some thought to the impact on employee morale if he does not use the company's own R&D department.

FINANCIAL REPORTING PROBLEM

- (a) M&S shows Intangible Assets on the statement of financial position. In its footnotes, M&S reposts Goodwill, Brands, Computer Software, and Computer Software Under Development. Goodwill of £117.9 million was reported at 29 March 2008.**
- (b) M&S reported selling and marketing expenses of £1,779.2 million in 2007 and £1,912.7 million in 2008. These expenses were significant compared to M&S's revenue—20.7% of revenue in 2007 and 21.2 in 2008.**

COMPARATIVE ANALYSIS CASE

- (a) (1) Cadbury reports: Goodwill £2,288M, Acquisition intangibles £1,598M, and Software intangibles £87M. Nestlé reports: Goodwill and Intangible Assets of CHF37,504M.
- (2) Cadbury: Intangible assets are 44.7% of total assets.
Nestlé: Intangible assets are 35.3% of total assets.
- (3) For Cadbury, intangible assets decreased £2,359M from £6,332M to £3,973M. For Nestlé, intangible assets decreased CHF3,136M from CHF40,640M to CHF37,504M.
- (b) (1) Cadbury amortizes customer relationships over 5–10 years and software intangibles over no greater than 8 years. Nestlé amortizes finite-lived intangibles over 5–20 years and management information systems over 3–5 years.
- (2) Cadbury had accumulated amortization of £183M and £62M on December 31, 2008 and 2007, respectively. Nestlé had accumulated amortization of CHF2,063M and CHF2,540M at year-end 2007 and 2008, respectively.
- (3) Cadbury identified the composition of its intangible assets as follows:

Acquisition intangibles	£1,598M
Goodwill	2,288
Software intangibles	<u>87</u>
	<u>£3,973M</u>

Nestlé identified its intangible assets as follows:

Goodwill	CHF30,637M
Intangible assets	<u>6,867</u>
	<u>CHF37,504M</u>

MERCK AND JOHNSON & JOHNSON

- (a) The primary intangible assets of a healthcare products company would probably be patents, goodwill and trademarks. The nature of each of these is quite different; thus, an investor would normally want to know what the composition of intangible assets is if it is material.
- (b) Many corporate executives complain that investors are too concerned about the short-term and don't reward good long-term planning. As a consequence, they feel that the requirement that research and development expenditures be expensed immediately penalizes those executives who do invest in the future. As a consequence, when net income does not look good, it is always tempting to cut research and development expenditures, since this will cause a direct increase in current year reported profits. Of course, it will also diminish the company's long-term prospects.
- (c) If a company reports goodwill on its statement of financial position, it can only have resulted from one thing—the company must have purchased another company. This is because companies are not allowed to record internally created goodwill. They can only report purchased goodwill. Ironically, if you want to report a large amount of goodwill, all you have to do is overpay when you purchase another company—the more you overpay, the more goodwill you will report. Obviously, reporting a lot of goodwill is not such a good thing.

FINANCIAL STATEMENT ANALYSIS CASE 2

- (a) The depressed market values (less than book value) suggest that market participants are not very optimistic about the future prospects for these companies. Accounting numbers are based in many cases on historical costs, while market prices will reflect new information about the company prospects. This situation does not look very promising.
- (b) Because the market (fair) value of each company is less than its book value of its net assets, it fails the first step in the goodwill impairment test; an impairment should be recorded.

A	B	C	D	E	F	G	H
					(Columns C–D)	(Columns B–F)	(Columns D–G)
Company	Market Value	Book Value (Net Assets)	Carrying Value of Goodwill	ROA	Estimated Fair Value of Net Assets	Implied GW (NA-Market Value)	Goodwill Impairment
Sprint Nextel	\$36,361	\$51,271	\$30,718	3.5%	\$20,553	\$15,808	\$14,910
Washington Mutual	11,742	23,941	9,062	2.4%	14,879	0	9,062
E*Trade Financial	1,639	4,104	2,035	5.6%	2,069	0	2,035
						Total	\$26,007

- (c) As indicated in the expanded spreadsheet above, unless their market value increases dramatically, each of these companies is likely to recognize a goodwill impairment. For Washington Mutual and E*Trade, the impairment will result in a complete write-off of the goodwill asset. Apparently, the prior acquisitions from which the goodwill was recorded did not pan out for these companies.

Loss on Impairment	26,007	
Goodwill.....		26,007

- (d) Impairment losses are reported in operating income. Thus, the impairments will reduce the numerator in the return on asset ratio. Without recognition of the impairments, these companies' operating performance is overstated relative to companies in their cohort. However, the denominator is also reduced, which increases ROA in the future.

INTERNATIONAL REPORTING CASE

(a) **ROE = Net Income ÷ Shareholders' Equity**

Bayer— $603 \div 12,268 = 4.92\%$

Glaxo Smithkline— $4,302 \div 10,091 = 42.63\%$

Merck— $5,813 \div 17,288 = 33.6\%$

Based on ROE, Glaxo-Smithkline exhibits the strongest profitability of these three companies at 42.6%. Bayer reports the lowest ROE at 4.9%. Examining the trend for each company and comparing it to other companies in the same country would also be useful in comparing these companies' profitabilities.

(b) **Glaxo Smithkline indicates that goodwill may be amortized over a range of periods—up to 20 years. Goodwill amortization is not allowed under U.S. GAAP and IFRS. Thus, even if all companies use the maximum amortization period, it would be difficult to compare their amortization expenses and income measures.**

Unless U.K. companies adopt a no amortization policy, a lack of comparability exists.

(c) **Goodwill adjustments:**

Related information	Bayer (DM millions)	Glaxo Smithkline (Pounds millions)	Merck (\$ millions)
(a) Amortization Expense	0	12	0
(b) Net Income	603	4,302	5,813
Adjusted Income (a + b)	603	4,314	5,813
(c) Accumulated Goodwill Amortization	0	84	0
(d) Shareholders' Equity	12,268	10,091	17,288
Adjusted SE (c + d)	12,268	10,175	17,288
ROE (from ref. a)	4.92%	42.6%	33.6%
Adjusted ROE (a + b) ÷ (c + d)	4.92%	42.4%	33.6%

INTERNATIONAL REPORTING CASE (Continued)

Making these adjustments results in a slightly lower ROE for Glaxo Smithkline. This is due to the relatively large goodwill asset that has been written off by Glaxo. Bayer's and Merck's ROE remains the same since they do not amortize goodwill per IFR Standards and FASB. Some analysts believe that goodwill should not be written off unless it is impaired. Per International Accounting Standards No. 36, goodwill is no longer amortized and is written off only if it is impaired. If written off, this understates assets and equity, resulting in an overstatement of profitability measures such as ROE and return on assets. This denominator effect can be more pronounced than the effects of amortization expense on income in the numerator of these ratios.

- (d) If some companies capitalize development expenses, this will result in higher reported assets and income (because R&D expense will be understated relative to U.S. GAAP). Thus any ratios relying on income and reported assets (ROA, ROE, Asset Turnover, etc.) should be adjusted for these effects. As long as the development costs and the development assets are disclosed, adjustments can be made to Bayer's reports to make them comparable to Merck's, similar to the adjustments made in Part (c).**

ACCOUNTING

There is a full year of amortization on the copyright. There is no amortization for the trade name, which is considered an indefinite-life intangible.

Amortization expense = $\$15,000/10 = \$1,500$

Copyright Amortization Expense	1,500	
Copyright.....		1,500

The recoverable amount of \$16,000 is greater than the carrying value. Thus, the copyright is not impaired: The trade name is tested for impairment using a recoverable amount test. Thus, Raconteur writes it down to the recoverable amount of \$5,000, recording an impairment charge of $\$8,500 - \$5,000 = \$3,500$.

Loss on Impairment	3,500	
Trade Name.....		3,500

ANALYSIS

Impairment losses are recorded in operating income. Because impairment losses tend to be nonrecurring items, their recognition can make operating income more volatile from year to year. This volatility effect can be particularly severe for indefinite-life intangibles, such as a trade name or goodwill. The higher carrying values (due to no amortization), combined with the annual impairment test, can result in impairment losses having a significant impact on operating income.

PRINCIPLES

The accounting for impairments provides relevant information about intangible assets by indicating in a timely fashion that intangible assets have declined in value. However, providing this timely information requires significant subjective judgments related to estimating recoverable amounts in determining the amount of the impairment to be recognized. These estimates may raise concerns about the reliability of impairment-loss amounts.

- (a) IFRS 3 addresses goodwill, while IAS 38 addresses intangible assets.**
- (b) IFRS 3 defines goodwill as “an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognised.” (Appendix A IFRS 3).**
- (c) No, goodwill is not amortized. However, it is subject to impairment, as discussed in IAS 36**
- (d) Goodwill recognised in a business combination is an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognised. Goodwill does not generate cash flows independently of other assets or groups of assets, and often contributes to the cash flows of multiple cash-generating units. Goodwill sometimes cannot be allocated on a non-arbitrary basis to individual cash-generating units, but only to groups of cash-generating units. As a result, the lowest level within the entity at which the goodwill is monitored for internal management purposes sometimes comprises a number of cash-generating units to which the goodwill relates, but to which it cannot be allocated. References in paragraphs 83–99 and Appendix C to a cash-generating unit to which goodwill is allocated should be read as references also to a group of cash-generating units to which goodwill is allocated (IAS 36, par. 81).**

Applying the requirements in paragraph 80 results in goodwill being tested for impairment at a level that reflects the way an entity manages its operations and with which the goodwill would naturally be associated. Therefore, the development of additional reporting systems is typically not necessary (par. 82).

PROFESSIONAL RESEARCH (Continued)

A cash-generating unit to which goodwill is allocated for the purpose of impairment testing may not coincide with the level at which goodwill is allocated in accordance with IAS 21 *The Effects of Changes in Foreign Exchange Rates* for the purpose of measuring foreign currency gains and losses. For example, if an entity is required by IAS 21 to allocate goodwill to relatively low levels for the purpose of measuring foreign currency gains and losses, it is not required to test the goodwill for impairment at that same level unless it also monitors the goodwill at that level for internal management purposes (par. 83).

If the initial allocation of goodwill acquired in a business combination cannot be completed before the end of the annual period in which the business combination is effected, that initial allocation shall be completed before the end of the first annual period beginning after the acquisition date (par. 84).

In accordance with IFRS 3 *Business Combinations*, if the initial accounting for a business combination can be determined only provisionally by the end of the period in which the combination is effected, the acquirer:

- a. accounts for the combination using those provisional values; and
- b. recognises any adjustments to those provisional values as a result of completing the initial accounting within the measurement period, which will not exceed twelve months from the acquisition date.

In such circumstances it might also not be possible to complete the initial allocation of the goodwill recognised in the combination before the end of the annual period in which the combination is effected. When this is the case, the entity discloses the information required by paragraph 133 (par. 85).

PROFESSIONAL SIMULATION

Journal Entries

January 2, 2010

Patents	60,000	
Cash		60,000

July 1, 2010

Patents	9,500	
Cash		9,500

September 1, 2010

Patents	28,000	
Cash		28,000

December 31, 2010

Patent Amortization Expense.....	7,500	
Patents		7,500

Computation of patent amortization expense:

\$60,000 X 12/120 =	\$6,000
\$9,500 X 6/114 =	500
\$28,000 X 4/112 =	<u>1,000</u>
Total	<u>\$7,500</u>

Measurement

Computation of impairment loss:

Cost.....	\$36,000
Less: Accumulated amortization	<u>6,750*</u>
Book value	<u>\$29,250</u>

*\$36,000 X 18/96 = \$6,750

PROFESSIONAL SIMULATION (Continued)

The book value of \$29,250 is greater than the recoverable amount. Therefore the franchise is impaired. The impairment loss is computed as follows:

Book value	\$29,250
Recoverable amount.....	<u>(13,000)</u>
Loss on impairment	<u>\$16,250</u>

Financial Statements

Intangible assets as of December 31, 2009

Franchise.....	<u>\$33,750*</u>
*Cost.....	\$36,000
Less: Accumulated amortization.....	<u>2,250**</u>
Total.....	<u>\$33,750</u>

$$**\$36,000 \times 6/96 = \$2,250$$

Note that the net loss and all organization costs are expensed in 2009.

Intangible assets as of December 31, 2010:

Franchise	\$ 13,000
Patents.....	90,000 (\$60,000 + \$9,500 + \$28,000 – \$7,500)
Goodwill	<u>180,000</u>
Total intangible assets	<u>\$283,000</u>

Note that all the costs to develop the secret formula and the research and development costs (except the \$28,000) are expensed as incurred.