CHAPTER OBJECTIVES

After careful study of this chapter, you will be able to:

1. Explain the accounting alternatives for intangibles.
2. Record the amortization or impairment of intangibles.
3. Identify research and development costs.
4. Explain the conceptual issues for research and development costs.
5. Account for identifiable intangible assets including patents, copyrights, franchises, computer software costs, and trademarks and trade names.
6. Account for unidentifiable intangibles, including internally developed and purchased goodwill.
7. Understand the disclosure of intangibles.
8. Explain the conceptual issues regarding intangibles.
Accounting for Intangibles

1. Intangible assets, which generally result from legal or contractual rights, do not have a physical substance. Like tangible noncurrent assets, intangible assets are held for use rather than investment; have an expected life of more than one year; are valuable because of their ability to generate revenue for their owners; and are expensed in the periods when their benefits are received if the assets have finite lives. Four additional characteristics of intangible assets distinguish them from tangible assets:

   (a) There is generally a higher degree of uncertainty regarding the future benefits of intangibles.
   
   (b) The value of intangibles is subject to wider fluctuations because it may depend considerably on competitive conditions.
   
   (c) Intangibles may have value only to a particular company.
   
   (d) Goodwill and intangible assets with indefinite lives are not expensed.

2. Accounting for intangible assets follows some of the general principles used for tangible assets. Both are initially recorded at cost. Some intangibles are amortized, while others are not but are reviewed for impairment. Intangible assets that are amortized are reported on a company’s balance sheet at their book values (cost - accumulated amortization). Amortization follows the same principles as depreciation. Similar principles apply to both intangible and tangible assets in regard to determining the acquisition cost, impairment, and disposal.

3. Companies may classify intangible assets as either purchased or internally developed, and as either identifiable or unidentifiable. Accounting for the costs of intangibles is discussed in FASB Statement No. 142:

   (a) Companies capitalize the costs of purchased identifiable intangibles (for example, purchased patents).
   
   (b) Companies capitalize the costs of purchased unidentifiable intangibles. (Goodwill, the major unidentifiable intangible, will be discussed later.)
   
   (c) Companies capitalize certain costs associated with internally developed identifiable intangibles (for example, the legal and related costs of establishing the rights associated with a patent). Research and development costs are an exception to the general rule of capitalization and must be expensed. (Research and development costs will be discussed later.)
   
   (d) Companies expense the costs of internally developed unidentifiable intangibles (such as employee training and product design) as incurred.

4. Intangible assets are classified into three categories: (a) intangible assets with a finite (limited) life, (b) intangible assets with an indefinite life, and (c) goodwill.

5. Intangible assets with a finite life are amortized. An intangible asset with a finite life (e.g., patent) is amortized over its useful life. The amount of an intangible asset to be amortized is the cost less the residual value. A company selects the amortization method based on the expected pattern of benefits. If the company cannot determine the expected pattern, then it uses the straight-line method. The entry to record the amortization is as follows:
If an intangible asset with a finite life becomes impaired, a company must write down the asset to its fair value.

6. Intangible assets with an indefinite life are reviewed for impairment. Some identifiable intangible assets (e.g., trademarks) have a potentially indefinite life. These intangible assets are not amortized (unless they are determined to have a useful life that is finite), but are reviewed at least annually for impairment. To review an intangible asset for impairment, a company estimates the fair value of the asset. The asset is impaired if its fair value is less than its carrying value. In this case, the company debits a loss account and credits the intangible asset account.

Research and Development Costs

7. GAAP requires that a company expense all research and development (R&D) costs as incurred, although R&D costs often benefit future periods. The requirement to expense R&D costs was based primarily on the belief that uniform treatment of R&D costs enhances comparability and eliminates the possibility of income manipulation. In addition, the problems of reliably determining the amount to capitalize and the amortization period are avoided.

8. Research is defined as the planned search or critical investigation aimed at discovering new knowledge with the hope that the knowledge will be useful in developing a new product of service or a new process or technique or in significantly improving an existing product or process. Development is the translation of research findings into a plan or design for a new product or service or for significantly improving an existing product or process. To help with application of those definitions, Exhibit 12-2 in the text presents examples of activities included in and excluded from R&D. A company capitalizes or expenses the costs of activities excluded from R&D according to the normal accounting criteria. A company includes the following costs of R&D activities in R&D costs and expenses them as incurred: (a) materials, equipment, and facilities, (b) personnel, (c) intangibles purchased from others, (d) contract services—the cost of services performed by others in connection with the company's R&D activities, and (e) a reasonable allocation of indirect costs, not including general and administrative costs unless they are clearly related to R&D.

9. A company includes the costs of any materials, equipment, facilities, and intangibles that are purchased from others and have no alternative future uses in R&D expense as incurred. For items that do have alternative future uses (even if only in other R&D projects), normal accrual procedures are followed.

10. The FASB considered four methods of accounting for R&D costs: (a) expensing all costs as incurred, (b) capitalizing all costs when incurred and amortizing them over the periods benefited, (c) capitalizing some costs and expensing other costs, (d) accumulating all costs in a special category until the existence of future benefits is determined. Because of the problems of determining the amount to capitalize and the period of amortization, alternatives (b), (c), and (d) are difficult to implement with reliability. Although alternative (a) (immediate expensing) is not perfect conceptually, that alternative was chosen by the FASB because it is easy to implement and it is likely to lead to greater comparability between companies.
Identifiable Intangible Assets

11. Identifiable intangible assets are those intangibles that can be purchased or sold separately from the other assets of the company. Because R&D and operating costs are expensed, a company capitalizes only certain costs of internally developed identifiable intangibles. For example, a company capitalizes the direct legal costs of applying for and registering an internally developed trademark, while it expenses all the indirect costs as incurred. In contrast, if a company purchases an identifiable intangible asset, it capitalizes the cost on the same basis as for a tangible asset by including all necessary costs.

12. A patent is an exclusive right granted by the federal government giving the owner control of the manufacture, sale, or other use of an invention for 20 years from the date of filing. The value of a patent lies in the competitive advantage it gives to the company. If that competitive advantage is expected to last less than 20 years, the company amortizes the patent over its shorter useful life. A company normally capitalizes the legal costs of successfully defending a patent against infringement. However, some companies expense the legal costs as incurred, because of uncertainty over the outcome of an infringement case. In any case, if an infringement lawsuit is lost, all legal expenses, as well as the remaining book value of the patent, are expensed.

13. A copyright is a grant by the federal government covering the right to publish, sell, or otherwise control literary or artistic products for the life of the author plus 70 years. A company amortizes the cost of a copyright over its useful life, on either a straight-line or an activity basis.

14. A franchise is an agreement in which, for a fee, one party (the franchisor) gives another party (the franchisee) rights to perform certain functions or to sell certain products or services. The franchisee capitalizes the initial franchise cost paid and amortizes it over the useful life of the franchise, unless the franchise is granted in perpetuity (in which case it would be tested for impairment at least annually). The franchisee expenses the continuing franchise fees paid for services in subsequent years according to normal matching criteria.

15. The costs of computer software developed to be sold, leased, or otherwise marketed may be divided into three categories:

(a) A company treats software production costs (such as costs of design, coding, and testing) as an R&D expense until the technological feasibility of the product is established. Technological feasibility is established either on the date of completion of detailed program design or on completion of a working model. A company capitalizes the software production costs incurred between the time of technological feasibility and the time when the product is available for general release and amortizes them over the expected life of the product, typically a relatively short period, such as five years. After the date of general release, the company expenses all software production costs as incurred. Amortization expense for capitalized software costs is the greater of (1) the ratio of current gross revenues from the software to estimated total (current and future) revenues from the software multiplied by the cost of the asset, or (2) straight-line expense. If the net realizable value of the software is less than the book value, the software is written down to the lower value, and a loss is recognized.

(b) A company records the unit costs of producing the software (such as the disk and duplication costs) as inventory and expenses them as cost of goods sold when the related revenue is recognized.

(c) A company expenses maintenance and customer support costs that arise after the software is released, as incurred.
Note that the discussion here applies to software developed for external use. Companies expense most computer software costs. Because the amount capitalized depends on the company's programming process, the costs capitalized may vary significantly from company to company.

16. A company expenses costs incurred in developing internal-use software incurred in the preliminary stage of development. A company capitalizes costs after the preliminary stage has been completed, management has authorized and committed to funding the project, and it is probable that the project will be completed and that the software will be used for the intended function. Capitalized costs include external direct costs of materials and services, payroll and payroll-related costs for the time employees spend on the project, and interest costs. A company amortizes the capitalized costs by the straight-line method over the estimated useful life of the software.

17. Leases (leaseholds) are actually intangible assets to the lessee, because they give the lessee the right to use property rather than ownership of the property. However, lessees normally include capitalized leases in property, plant, and equipment, rather than report them as intangible assets. Lessees normally include leasehold improvements, also intangible assets, as a separate item in property, plant, and equipment.

18. Registration of a trademark or trade name with the U.S. Patent Office gives a company the right to exclusive use of a name, symbol, or other devices used for product identification. Registration lasts for 20 years and is renewable indefinitely if the trademark or trade name is used continuously. Therefore, they typically are not amortized, but are reviewed for impairment at least annually.

19. Organization costs incurred in forming a corporation include legal fees, stock certificate costs, underwriting fees, accounting fees, and promotional fees. AICPA Statement of Position No. 98-5 requires that the costs of start-up activities, including organization costs, be expensed as incurred.

Unidentifiable Intangibles

20. Many intangibles essential to the performance of the company (such as superiority of employees and advantageous geographical location) do not appear on the balance sheet. Such internally developed intangibles are categorized as goodwill. Goodwill is distinguished by two characteristics: (a) Intangibles included are considered unidentifiable because they are not separable from the identified and recorded assets, and (b) Measurement of these unidentifiable intangibles is very difficult, and less reliable than measurement of identifiable intangibles. Companies expense internally developed goodwill as incurred.

21. Purchased goodwill may be recorded by the acquiring company when it purchases a company (or a significant part of a company). The purchase transaction establishes a reliable valuation. Purchased goodwill is defined as the difference between the purchase price (market value) of the acquired company as a whole and the fair value of its identifiable net assets (assets − liabilities). That difference is the price paid for the unidentifiable intangibles that were internally developed by the acquired company. The value recorded for goodwill is determined by the price paid in the purchase transaction. Companies capitalize purchased goodwill.

22. Goodwill is never amortized. A company must review its goodwill for impairment at least annually at the reporting unit (i.e., operating segment) level. The company reviews its goodwill for impairment whenever events or changed circumstances occur that make it likely that the fair value of the goodwill has been reduced below its carrying value.

23. A company reviews its goodwill for impairment using a two-step approach. First, the company compares the fair value of the reporting unit with its book value (including goodwill). Second, if the fair value is less than the book value, the company must measure the amount of the impairment loss, if any.
24. The amount of the impairment loss is the difference between the carrying value of the goodwill and the lower implied fair value of the goodwill (i.e., the implied value is the excess "purchase price" over the amounts assigned to the identifiable assets and liabilities). The entry to record the loss includes a debit to Impairment Loss and a credit to Goodwill.

25. Negative goodwill ("bargain purchase") arises when the price paid for a company is less than the fair value of the net assets acquired. Negative goodwill is not separately recorded. The acquiring company must allocate the negative amount to proportionately reduce the cost of the noncurrent assets acquired (except certain assets). If noncurrent assets are reduced to zero, the acquiring company records and reports any remaining amount as an extraordinary gain.

Disclosure for Intangible Assets

26. GAAP requires a company to disclose certain information about its intangible assets, including:

(a) In the period it acquires intangible assets: (1) the cost (separated into assets subject to amortization, not subject to amortization, and goodwill); (2) for assets subject to amortization, the residual value and amortization period; and (3) the cost of any R&D acquired and written off (and where reported on its income statement).

(b) In each period for which it presents a balance sheet: (1) for amortized intangibles, the cost, accumulated amortization, amortization expense, and estimated amortization expense for the next five years; (2) for nonamortized intangibles, the total cost and cost of each major intangible asset class; (3) for goodwill, the amount acquired, amount of any recognized impairment loss, and amount included in the disposal of a reporting unit; and (4) for any intangible asset impairment, the reason, the amount of the impairment loss, and the method of determining the fair value.

SELF-EVALUATION EXERCISES

True-False Questions

Determine whether each of the following statements is true or false.

1. Similar principles for determination of acquisition costs, impairment, and disposal apply to both tangible and intangible assets.  
   **Answer: True**  
   Tangible and intangible assets in general have the same criteria for determination of the cost, impairment, and disposal.

2. Companies capitalize the costs of purchased identifiable intangible assets.  
   **Answer: True**  
   Generally speaking, all purchased intangible assets are capitalized. In addition, with the exception of R&D costs, all identifiable assets are capitalized.

3. Companies capitalize the costs of purchased unidentifiable intangible assets.  
   **Answer: True**  
   Generally speaking, all purchased intangible assets are capitalized.

4. Companies capitalize the costs of internally developed unidentifiable intangible assets.  
   **Answer: False**  
   In general, companies do not capitalize internally developed unidentifiable intangible assets.
5. In general, except for research and development costs, companies capitalize the costs associated with internally developed identifiable intangible assets.

Answer: True
In general, with the exception of R&D costs, companies capitalize most costs associated with internally developed identifiable intangible assets. The capitalized costs of intangibles with indefinite life are reviewed for impairment at least annually.

6. Intangible assets with an indefinite life are reviewed at least annually for impairment.

Answer: True
Because an intangible asset with an indefinite life is not amortized (there is no period of time to amortize the asset because it has an indefinite life), it must be checked periodically to see if it is still worth the amount that it is recorded on the books. This review for impairment is required annually.

7. GAAP requires companies to capitalize all R&D costs.

Answer: False
GAAP requires that R&D costs that have no alternative use be expensed as incurred due to the inability to reliably determine how much to capitalize and over which periods to capitalize the costs.

8. The value of capitalized goodwill is determined by the purchase price of the acquired company.

Answer: True
Internally developed goodwill is not capitalized; therefore, the only type of goodwill capitalized is purchased goodwill. The value of goodwill by definition is the price paid in excess of the fair value of the identifiable net assets of an acquired company.

9. A company includes the cost of purchased R&D materials and intangibles with no alternative future uses in R&D expense on the current income statement.

Answer: True
R&D costs that have no alternative uses are expensed in the period in which they are incurred. If these items had an alternative use (even if only in other R&D projects), they would be capitalized and depreciated over the asset’s estimated useful life.

10. Intangible assets with an indefinite life are amortized using the straight-line method over a period not to exceed 20 years.

Answer: False
If an intangible asset does not have a definite life, there is no period over which to amortize the cost of the asset and it is therefore not amortized. Instead, it is reviewed annually to check for impairment.

11. A company records negative goodwill on the balance sheet as a noncurrent liability.

Answer: False
GAAP requires that negative goodwill not be recorded. Instead, the amount paid is allocated proportionately among the assets as discussed in Chapter 11.
12. The amount recorded for purchased goodwill is determined reliably by statistical techniques.

   **Answer: False**

   The value of purchased goodwill is generally only an estimate and cannot be reliably determined. There are several methods to estimate the value of goodwill. The most conceptually correct is to compute the present value of a company's future earnings.

13. A company capitalizes the costs incurred in developing an invention at the time it is granted a patent.

   **Answer: False**

   Most costs associated with the development of a patent would be R&D costs, which are expensed as they are incurred therefore they are not capitalized. However, costs associated with direct legal costs or applying for and recording the actual patent are capitalized.

14. Intangible assets that appear to have an indefinite life are expensed when they are acquired.

   **Answer: False**

   If an intangible asset has an indefinite life, there is no period over which to amortize the cost of the asset and it is therefore not amortized. However, because they are assets and contain benefits for future periods, they must be capitalized and not expensed. Instead, it is reviewed annually to check for impairment.

15. The straight-line method is always used for the amortization of capitalized intangibles.

   **Answer: False**

   Just as with depreciation, a company will select the method of amortization that best fits the expected pattern of benefits the intangible asset will provide. If a company cannot determine a specific pattern of benefits, it is required to use the straight-line method.

16. Up until the time a software product is released for sale, all production costs are capitalized, to be amortized over the expected life of the product.

   **Answer: False**

   Software production costs are included in R&D costs and are expensed as incurred until a technologically feasible product is established. Once the technological feasibility of a product is determined, production costs would be capitalized and amortized over the useful life of the product.

17. Like tangible assets, intangibles are initially recorded at cost.

   **Answer: True**

   There are many similarities between the accounting for intangible assets and tangible assets; among these similarities is that intangibles are initially recorded at the cost of the intangible asset.

18. A franchisee capitalizes continuing franchise fees and amortizes the fees over the useful life of the franchise.

   **Answer: False**

   A franchisee capitalizes and amortizes the *initial* franchise fee. However, the *continuing* franchise fees are expensed according to the matching principle.
19. When an infringement lawsuit is lost by the company owning a patent, all legal fees and the remaining book value of the patent are expensed.

Answer: True

Legal costs of defending a patent can be capitalized if the defense of the patent is successful. However, if the defense of the patent is unsuccessful there is no economic value left in the patent and all the legal expenses and remaining book value of the patent are expensed.

20. An impairment loss on an intangible asset with a finite life is amortized over the useful life of the asset.

Answer: False

Again, similar to tangible assets, if an impairment of an intangible asset with a finite life occurs, the loss associated with this impairment is recorded and the intangible asset is written down to its fair value using the method discussed in Chapter 11.

Multiple Choice Questions

Select the one best answer for each of the following questions.

1. Which of the following is not a characteristic distinguishing intangible assets from tangible assets?
   (a) the value of intangibles fluctuates less from competitive conditions
   (b) there is generally greater uncertainty regarding expected future benefits of intangibles
   (c) intangibles may have value only to a particular company
   (d) goodwill and intangible assets with indefinite lives are not expensed

Answer: (a) the value of intangibles fluctuates less from competitive conditions

Intangible assets are usually subject to much higher, not less, fluctuations than tangible assets because they may depend on competitive conditions.

Choices (a), (b), and (c) are all incorrect because these characteristics do distinguish intangible assets from tangible assets.

2. Which of the following methods of accounting for R&D costs is required by GAAP?
   (a) capitalizing all costs as incurred
   (b) capitalizing some costs and expensing other costs
   (c) accumulating all costs until the existence of future benefits is determined
   (d) expensing all costs as incurred

Answer: (d) expensing all costs as incurred

GAAP requires that all R&D costs be expensed as incurred. If an asset has an alternative use (even if only for another R&D project), it should be capitalized as a tangible asset.

Choices (a), (b), and (c) are incorrect. Each of these options was considered by the FASB before making the decision to require expensing of R&D costs. Each of these options has merit and arguments could be made from a theoretical standpoint for them, but for comparability and reliability, FASB chose the expensing option.
3. Which of the following statements about goodwill is not correct?
   (a) Components may include superiority of employees and advantageous geographical position.
   (b) Companies capitalize purchased goodwill but expense the costs of internally developed goodwill as they are incurred.
   (c) Internally developed goodwill is periodically evaluated and capitalized.
   (d) Measurement of goodwill is less reliable than measurement of identifiable intangibles.

Answer: (c) Internally developed goodwill is periodically evaluated and capitalized. Internally developed goodwill is never capitalized. Choices (a), (b), and (c) are all correct statements concerning goodwill.

4. Which of the following is not an advantage of the policy of expensing all R&D costs as incurred?
   (a) Expensing enhances comparability.
   (b) Expensing lessens the possibility of income manipulation.
   (c) Expensing avoids the problem of estimating the amortization period.
   (d) Expensing appropriately matches the R&D costs to revenues produced.

Answer: (d) Expensing appropriately matches the R&D costs to revenues produced. Expensing does not appropriately match R&D costs to revenue produced. One of the biggest arguments against the present system of expensing R&D costs as they are incurred is that it violates the matching principle. In theory, the costs of R&D will benefit future periods and should be written off through amortization as the projects contribute to revenue. Choices (a), (b), and (c) are all incorrect. Each of these items were reasons why the FASB decided that expensing of R&D costs would be the best treatment.

5. Which of the following costs of R&D activities should not be expensed?
   (a) costs of intangibles purchased from others
   (b) costs of contract services
   (c) costs of externally purchased assets with alternative future uses
   (d) a reasonable allocation of indirect costs

Answer: (c) costs of externally purchased assets with alternative future uses. Assets that have an alternative use (even if only for other R&D projects) should be capitalized and amortized over the period of the asset's useful life. Choice (a) is incorrect because the cost of intangibles purchased from others for R&D is expensed. Choices (b) and (d) are incorrect because the use of these items in R&D requires expensing, not capitalization.
6. Which of the following may be a component of a company's goodwill?
   (a) the value of leasehold improvements
   (b) the value of the company's trademark
   (c) the value of the company's inventory
   (d) the value of a favorable location

   **Answer:** (d) the value of a favorable location

   The value of a favorable location cannot be shown on a company's balance sheet despite the advantage it may present for a company. This is an example of a company's goodwill.

   Choice (a) is incorrect because the value of leasehold improvements are a separate intangible asset that is not considered goodwill. The type of lease (which will be discussed in Chapter 21) determines whether the leasehold improvements are accounted for as property, plant, and equipment or as an intangible asset. Choice (b) is incorrect because a company's trademark is an intangible asset in its own right and is not considered a part of goodwill. Choice (c) is incorrect the value of a company's inventory is a tangible asset that is reported as a current asset on the balance sheet.

7. Which of the following costs should a company expense as incurred?
   (a) the costs of purchased identifiable intangible assets
   (b) the costs of internally developed unidentifiable intangible assets
   (c) the costs of purchased unidentifiable intangible assets
   (d) certain costs, other than R&D costs, associated with internally developed identifiable intangible assets

   **Answer:** (b) the costs of internally developed unidentifiable intangible assets

   Internally developed intangible assets are expensed as incurred. They are treated in this manner because either the useful life or the costs incurred are difficult to reliably measure and could be subject to manipulation.

   Choices (a) and (c) are incorrect because either purchase of these items from a third party helps to establish a reliable cost. Choice (d) is incorrect because many of these costs, such as legal and registration costs, are capitalized.
8. Capitalized intangible assets:
   (a) are amortized if the assets appear to have potentially indefinite lives.
   (b) are always amortized using the straight-line method.
   (c) considered impaired if their carrying values are less than their fair values.
   (d) are reviewed for impairment, rather than amortized, if their useful lives appear to be indefinite.

   **Answer:** (d) are reviewed for impairment, rather than amortized, if their useful lives appear to be indefinite.

   If an intangible asset has an indefinite useful life it would be impossible to amortize because you cannot determine over which periods it will provide benefits. For this reason, intangible assets with indefinite useful lives are reviewed for impairment and written down as necessary.

   Choice (a) is incorrect because a potentially indefinite life precludes amortization of a capitalized intangible asset. Choice (b) is incorrect because capitalized intangible assets, if subject to amortization, should be amortized similar to tangible assets. That is, amortization methods should be based on the expected pattern of benefits they will create. Choice (c) is incorrect because an intangible with a book value less than a fair value is not impaired. As long as fair value is greater than book value, it can be assumed that the benefits of ownership will be recovered. When the fair value is less than the book value, then the asset is impaired and must be written down through an impairment loss.

9. Which of the following statements regarding patents is correct?
   (a) A patent that is purchased can be amortized over a period of at least 20 years.
   (b) A patent that is purchased can be amortized over a period of up to 20 years from the date it was originally filed, or its useful life, whichever is shorter.
   (c) A patent that is purchased can be amortized over a period of up to 20 years from the date it was originally filed, or its useful life, whichever is longer.
   (d) Patents are never amortized, only expensed as costs are incurred.

   **Answer:** (b) A patent that is purchased can be amortized over a period of up to 20 years from the date it was originally filed, or its useful life, whichever is shorter.

   A patent that is purchased can be amortized. The life of such a patent is either 20 years from the date of original filing or the patent’s useful life, whichever is shorter.

   Choice (a) is incorrect because a patent in no circumstances can be amortized over a period of greater than 20 years. Choice (c) is incorrect because the amortization period for a purchased patent is 20 years from the date of the original filing or the patent’s useful life, whichever is shorter, not longer. Choice (d) is incorrect because a purchased patent can be amortized.
10. Which of the following statements related to computer software costs is correct?

(a) Production costs of software developed for sale are included in R&D expenses until the technological feasibility of the product is established.

(b) Costs incurred during the preliminary stage of development of software intended for internal use are capitalized.

(c) Production costs of software developed for sale incurred between the times of technological feasibility and general release are expensed.

(d) All software production costs of software developed for sale are expensed as incurred.

**Answer: (a)**

Production costs of software developed for sale are included in R&D expenses until the technological feasibility of the product is established.

Production costs of software developed for sale are included in R&D expenses until the technological feasibility of the product is established. Once the technological feasibility of the project has been established, then production costs are capitalized.

Choice (b) is incorrect because production costs are expensed until a software project has been deemed technologically feasible. Choice (c) is incorrect because once technological feasibility is reached, production costs are capitalized. Choice (d) is incorrect because the treatment of software production costs are both capitalized and expensed depending on the phase of the project.

11. An exclusive 20-year right to manufacture a product is a:

(a) copyright.

(b) franchise.

(c) patent.

(d) trademark.

**Answer: (c)**

A patent is an exclusive right guaranteed by the federal government allowing the owner control of the manufacture, sale, or other use of an invention for 20 years from the date of filing.

Choice (a) is incorrect because a copyright is a grant by the government covering the right to publish, sell, or otherwise control literary or artistic products for the life of the author plus 70 years. Choice (b) is incorrect because a franchise is an agreement entered into by two partners in which, for a fee, one party gives the other party rights to perform certain functions or sell certain products or services. Choice (d) is incorrect because a trademark is a governmentally established right to exclusive use of a name, symbol, or other device for product identification.
K&P has an extensive R&D department that conducts research on hundreds of projects in their laboratories in New Braunfels, Texas. In 2011, they incurred the following R&D costs:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
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<tbody>
<tr>
<td>Equipment used exclusively for project XYZ</td>
<td>$75,000</td>
</tr>
<tr>
<td>Building purchased to house all of the R&amp;D laboratories</td>
<td>$2,800,000</td>
</tr>
<tr>
<td>Depreciation on new laboratory building for 2011</td>
<td>$175,000</td>
</tr>
<tr>
<td>Materials on project XYZ</td>
<td>$350,000</td>
</tr>
<tr>
<td>Outside testing fees for project ABC</td>
<td>$82,000</td>
</tr>
<tr>
<td>Indirect costs appropriately allocated</td>
<td>$130,000</td>
</tr>
</tbody>
</table>

12. The total amount of R&D costs charged to the 2011 income statement is:

(a) $3,437,000.
(b) $637,000.
(c) $812,000.
(d) $425,000.

Answer: (c) $812,000.

Of the charges listed, all are expensed in 2011 except the charges associated with the new laboratory building. Because this building is not used exclusively on one project, it is considered to have an alternative use and should be capitalized and depreciated as appropriate. Therefore, the $2,800,000 would not be included as an expense in 2011. However, the $175,000 depreciation is appropriately a 2011 cost and should be included on the income statement; therefore the total expense on the 2011 income statement is:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
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<tbody>
<tr>
<td>Equipment used exclusively for project XYZ</td>
<td>$75,000</td>
</tr>
<tr>
<td>Depreciation on new laboratory building for 2011</td>
<td>$175,000</td>
</tr>
<tr>
<td>Materials on project XYZ</td>
<td>$350,000</td>
</tr>
<tr>
<td>Outside testing fees for project ABC</td>
<td>$82,000</td>
</tr>
<tr>
<td>Indirect costs appropriately allocated</td>
<td>$130,000</td>
</tr>
<tr>
<td>Total expenses for 2011</td>
<td>$812,000</td>
</tr>
</tbody>
</table>

Choice (a) is incorrect because it includes the building as R&D costs that are expensed. Because the building is used for more than one project, it has an alternative use and should be capitalized. Choice (b) is incorrect because it does not include the appropriate depreciation expense on the laboratory building. Choice (d) is incorrect because it only lists the expenses for project XYZ and not other appropriately charged R&D expenses.
Purchased Goodwill

Purchased goodwill arises when a company is purchased. If the purchase price is more than the fair value of the purchased company’s reported identifiable net assets, this excess price is called goodwill.

| Strategy: | Goodwill is present in most companies; however, only goodwill resulting from a purchase is recorded as an intangible asset. |
| Strategy: | In some instances, companies are purchased for less than the fair value of a company’s reported identifiable net assets. This would create a negative amount for goodwill. Negative goodwill is not allowed under GAAP. In this case, the difference will be allocated proportionately among the reported identifiable net assets reducing their costs. This is treated similarly to the lump sum purchase discussed in Chapter 10. |

To record the purchase of goodwill, a company would debit the assets acquired and credit the liabilities acquired as well as the amount of cash paid. The difference would be goodwill.

On July 1, 2011, Casey Corporation purchased the Kelley Corporation for $1,200,000. At the time of purchase, the fair value of Kelley’s identifiable assets was $2,000,000 and the fair value of the liabilities was $1,100,000. The journal entry to record the purchase would be:

```
Identifiable Assets  2,000,000
Goodwill  300,000
Liabilities  1,100,000
Cash  1,200,000
```

| Strategy: | Goodwill is found by “plugging” the number that makes the debits = credits. |

The $300,000 in the goodwill account will not be amortized because of the indefinite life of goodwill. However, we will have to test annually to see if the goodwill has become impaired. If at some point it does become impaired, an entry to record an impairment loss and reduction in the value of goodwill would be required.
The Grimes Company was organized on January 1, 2011. At December 31, 2011, the company had the following intangible assets on its balance sheet:

2. Copyright (purchased July 1, 2011) with an estimated useful life of 10 years $20,000
3. Trademark (purchased January 1, 2011) with an indefinite life $6,400
4. Goodwill (acquired January 2, 2011, with purchase of the Golden Company) $9,600
5. Initial franchise fee paid (payment made January 1, 2011, to cover five-year franchise period) $8,500

The company spent $45,000 on research and development during 2011, including $20,000 for a machine, purchased on January 1, which will be used in various research and development projects over the next five years. The company uses the maximum allowable amortization periods. Prepare journal entries to record amortization and depreciation expense for 2011.
According to generally accepted accounting principles, some costs associated with intangible assets are initially capitalized, while other costs are expensed as incurred. Indicate how each of the costs listed next should be recorded by placing a C (capitalized) or an E (expensed) in the space provided.

___ 1. cost of a machine purchased for temporary use in research and development, then subsequent use in production of a product

___ 2. unit costs of producing software

___ 3. cost of goodwill recorded on purchase of a subsidiary

___ 4. costs of development of a product now in production

___ 5. costs of design, coding, and testing of software developed for sale during the period prior to technological feasibility

___ 6. cost of a purchased patent

___ 7. cost of initial franchise fee paid by franchisee

___ 8. underwriting costs and accounting fees incurred during organization of the corporation

___ 9. cost of employee training and product design

___ 10. payments for contract services related to R&D

___ 11. legal fees paid for unsuccessful attempt to defend a patent against infringement

___ 12. software production costs after the date of general release

___ 13. costs associated with internal development of goodwill

___ 14. legal costs of applying for an internally developed trademark

___ 15. payments of continuing franchise fees by franchisee
12-3. Investors are considering the purchase of the Wizard Company. They have compiled the following data about Wizard:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Book value of net assets</td>
<td>$975,000</td>
</tr>
<tr>
<td>Fair value of recorded net assets</td>
<td>1,050,000</td>
</tr>
<tr>
<td>Fair value of internally developed (unrecorded) patent</td>
<td>10,000</td>
</tr>
<tr>
<td>Fair value of fully depreciated buildings</td>
<td>200,000</td>
</tr>
<tr>
<td>Average annual earnings</td>
<td>120,800</td>
</tr>
<tr>
<td>Industry average earnings</td>
<td>100,800</td>
</tr>
<tr>
<td>Present value factor for annuity of 10 periods at 10%:</td>
<td>6.144567</td>
</tr>
</tbody>
</table>

(1) It is estimated that excess earnings will continue for 10 years. The investors are willing to pay the current market price of identifiable net assets plus goodwill equal to the present value at 10% of excess earnings. Compute (a) the purchase price, and (b) goodwill.

(2) It is assumed that the Wizard Company will earn $120,800 in perpetuity, and that the normal industry return is 8% of identifiable net assets. Compute (a) the purchase price, and (b) goodwill.
ANSWERS TO TEST YOUR KNOWLEDGE

12-1.  
Amortization Expense 5,145  
Accumulated Amortization: Patent ($28,900 ÷ 20) 1,445  
Accumulated Amortization: Copyright ($20,000 ÷ 10) 2,000  
Accumulated Amortization: Initial Franchise Fee ($8,500 ÷ 5) 1,700  
To record amortization of intangible assets.

R&D Expense 4,000  
Accumulated Depreciation – Machinery 4,000  
To record depreciation of machine with alternative future uses.

12-2.  

12-3.  
(1) (a) $1,382,891 [$1,050,000 + $10,000 + $200,000 + ($20,000 × 6.144567)]  
(b) $122,891 [$1,382,891 – ($1,050,000 + $10,000 + $200,000)]  
(2) (a) $1,510,000 [$120,800/0.08]  
(b) $250,000 [$1,510,000 – ($1,050,000 + $10,000 + $200,000)]