Mastering Research Administration

A Complete Guide to the CRA®, CPRA®, and CFRA® Exams

Farin Kamangar, MD, PhD, CRA
University Distinguished Professor
Associate Vice President for Research
Morgan State University
Baltimore, MD, USA

Lulu Jiang, PhD
Program Administrator
National Transportation/SMARTER Centers
Morgan State University
Baltimore, MD, USA

Rebecca Steiner, CRA
Grants Manager
Office of Research Administration
Morgan State University
Baltimore, MD, USA

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- While it is generally considered best practice to avoid negative phrasing and answer choices such as “all of the above” or “none of the above” in standardized multiple-choice questions, these materials were created for training purposes. In some instances, we have intentionally used such formats.

Correspondence to: farin.kamangar@morgan.edu

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CHAPTER 9
Intellectual Property

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9.1. Introduction

Intellectual property (IP) refers to creations of the mind (intellect) that are given legal protection because they have commercial or cultural value. For example, a song may be intellectual property: it is a creation of the mind, and it may have commercial or cultural value. Likewise, designing a method to make car batteries more efficient may be considered intellectual property.

Protection of IP is rooted in the U.S. constitution and Acts of Congress. Article I, Section 8, Clause 8 of the Constitution stipulates that: "*The Congress shall have Power… To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.*" Please note the specific language in this Clause: it promotes the progress of science and useful arts, and it offers exclusivity for a limited time in return for disclosure of the useful information.

Some Acts of Congress, such as the Bayh-Dole Act, codified in Title 37 of CFR, encourage university researchers to disclose their inventions that result from federal funding.

In this Chapter, we will discuss:

- The main types of intellectual property, i.e., patents, copyrights, trademarks, and trade secrets;
- Some of the main elements of the Bayh-Dole Act, which governs intellectual property resulting from federal grants.

9.2. Types of Intellectual Property

The four major IP types are **patents**, **copyrights**, **trademarks**, and **trade secrets**.

- **Patents** protect novel and useful inventions or processes, such as a new process to generate insulin.
- **Copyrights** protect creative works, like books, songs, and art.
- **Trademarks** protect words, logos, or symbols that distinguish goods or services.
- **Trade secrets** protect valuable information that gains its worth from being kept confidential.

9.2.1. Patents

Patents grant inventors exclusive rights to their inventions for **20 years from the filing date**. Patents may cover **new inventions**, **asexual methods to reproduce plant varieties**, or **ornamental designs**.

Following are a sampling of historical patents. Alexander Graham Bell patented the telephone (U.S. Patent No. 174,465), i.e., he patented the method and apparatus for transmitting vocal or other sounds telegraphically by causing electrical undulations, in 1876. In 1973, Martin Cooper and colleagues at Motorola patented the Radio Telephone System (U.S. Patent No. 3,906,166), one of the key patents for cell phones. In 2009, Steve Jobs and colleagues patented the iPhone Multi-Touch Interface (U.S. Patent No. 7,479,949), a touch-screen device interface that allowed users to control electronic devices through multi-touch gestures (e.g., pinch-to-zoom, swipe, and tap). These patents clearly show the progress of science and technology.

In the United States, the United States Patent and Trademark Office (USPTO), within the Department of Commerce, reviews and grants patents. Under the America Invents Act (2011), the United States follows a "first-to-file" system, giving rights to the party who files first, not necessarily the first to conceive the idea.

A patent application may be **regular (non-provisional)** or **provisional**. Provisional patents allow inventors to secure filing priority while final data is still being collected. However, **a full or regular patent must be filed within 12 months of a provisional patent** in order for legal protections to continue. The provisional patent application was created by the USPTO in 1995 to make it easier, faster, and cheaper for inventors—especially individuals, startups, and universities—to secure an early filing date. The provisional patent was devised, in part, 1) to encourage early disclosure; 2) to establish priority; 3) to reduce initial cost and complexity; and 4) to support academic and small innovators.

3.2.2 Copyrights

Copyrights protect **original creative works that are fixed in a tangible medium**, such as books, music, poems, and software. Protection is automatic upon creation - though using the © symbol and registering with the Library of Congress provides legal advantages, including statutory damages.

For works created by individuals, **copyright typically lasts for the author's life plus 70 years**. For example, books written in 2005 by a faculty member may still be under copyright protections, but the writings of Shakespeare are no longer copyrighted.

NB: Works produced by federal employees as part of their official duties are not copyrightable.

3.2.3 Trademarks

Trademarks protect **words**, **phrases**, **logos**, or **symbols that distinguish a particular source of goods or services**.

Apple's and Nike's logos are trademarks: each logo delineates which company produces and sells that product. Likewise, Nike's "*Just Do It*" or McDonald's "*I'm Lovin' It*" are examples of trademarked phrases.

Unlike patents and copyrights, trademarks can **last indefinitely as long as they are renewed and used in commerce**. Trademarks help consumers identify the origin of a product or service, but do not prevent competitors from offering similar services.

To use the ® symbol, organizations must file with and receive approval from the U.S. Patent and Trademark Office (USPTO).

3.2.4 Trade Secrets

Trade secrets consist of **confidential business information that provides a competitive edge**, such as formulas, processes, or algorithms. One of the key characteristics of trade secrets is that their value is lost if they are divulged to others via disclosure, reverse-engineering, or being rendered obsolete by scientific advances.

Unlike patents, trade secrets are **not registered with the federal government but are generally protected under state laws**. Universities may hold trade secrets through privately funded research only; federally funded inventions are subject to disclosure rules.

Table 1. Comparing the Four Types of Intellectual Property

	Patents	Copyrights	Trademarks	Trade secrets
Types	Utility patents Design patents Plant patents	Books Songs Poems Art ...	Signs Phrases Designs Logos ...	Secret recipes Secret algorithms Customer lists ...
Example	Herceptin (a new drug)	Harry Potter (a new book)	Nike's logo	Coca-Cola's recipe
Characteristics	• Novel (new) • Useful • Not previously patented	• Novel (new) • In tangible form (e.g., in writing or recorded)	• Clearly distinguishable • Non-functional • Not offensive, deceptive, or misleading	• Unknown to outsiders • Of economic value • Reasonable steps must be taken to protect or restrict it
Duration	20 years	Life of the author + 70 years	Forever, as long as renewed	Forever, as long as secret kept
Where to file	USPTO	US Library of Congress	USPTO	Not filed

9.3. University and Research Agreements

Universities often navigate intellectual property through federal laws and agreements. The Bayh-Dole Act allows institutions to retain rights to federally funded inventions, provided they disclose and patent them in a timely manner.

Systems like iEdison, developed by the NIH, are used to report inventions to federal agencies. Universities also use Material Transfer Agreements (MTAs) when sharing biological or chemical materials, often to manage hazards, trade secrets, or potential royalties. The NIH developed the Uniform Biological Material Transfer Agreement (UBMTA) to standardize these processes, mainly for use between universities. Non-disclosure agreements (NDAs) may also be signed, but require careful review to avoid conflicts with research policies and funding agreements.

9.4. The Bayh-Dole Act of 1980

As discussed earlier, protection of IP is rooted in both the U.S. Constitution and acts of Congress. Universities often conduct their research using federal funds. Hence, the majority of patents developed by universities are funded by the federal government. Prior to the Bayh-Dole Act, such inventions typically belonged to the federal government, often resulting in limited commercialization. The Bayh–Dole Act of 1980 changed that; it allows universities, small businesses, and non-profit institutions to retain ownership of inventions developed through federally funded research. It requires recipients to report inventions, share royalties with inventors, and give preference to U.S. manufacturing when licensing. The act has significantly boosted technology transfer, spurred innovation, and contributed to thousands of start-ups, patents, and products arising from federally sponsored research.

The requirements of the Bayh-Dole Act are codified in 37 CFR 401. To have the rights to their grant-funded IP, the institution (e.g., the university) must:

- Disclose to the government, within 2 months of the inventor's disclosure to the recipient organization;
- Elect to retain title, within 2 years of the disclosure to the federal government;
- File Patent, within 1 year of electing to retain title.

In all of these cases, disclosure and being timely matters. If these requirements are not met, the federal government may choose to take or reassign the title of the invention.

9.5. Summary

Intellectual property (IP) refers to legally protected creations of the mind, and it plays a critical role in research and innovation. The four main categories are **patents**, **copyrights**, **trademarks**, and **trade secrets**. Patents protect inventions and grant exclusive rights for 20 years, while copyrights safeguard original works like books, music, or software, usually for the author's life plus 70 years. Trademarks distinguish goods and services through names, symbols, or designs, and can last indefinitely with continued use and renewal. Trade secrets cover confidential information, such as formulas or algorithms, and remain protected as long as secrecy is maintained.

Universities manage IP differently from corporations, largely due to the Bayh-Dole Act, which allows them to retain ownership of federally funded inventions, while ensuring proper reporting and revenue-sharing with inventors. Tools such as iEdison, Material Transfer Agreements (MTAs), and the Uniform Biological Material Transfer Agreement (UBMTA) help streamline compliance and collaboration. Non-disclosure agreements (NDAs) are also used, though they must balance confidentiality with academic openness.

Federal policy, rooted in the U.S. Constitution and modernized through legislation like the America Invents Act, shapes how IP is protected and transferred. For research administrators, understanding these frameworks is essential to ensure compliance, protect institutional interests, and support the commercialization of discoveries that benefit society.

9.6. Practice Questions

1. Intellectual Property includes all of the following, EXCEPT:
    a. Copyright
    b. Patents
    c. Trademarks
    d. Falsification

2. Wegovy is a medication used to reduce weight. What allows Novo Nordisk, the inventor, to make profit from selling this medication is primarily a:
    a. Copyright
    b. Patent
    c. Trademark
    d. Trade secret

3. Apple's logo is an example of a:
    a. Copyright
    b. Patent
    c. Trademark
    d. Trade secret

4. Taylor Swift's songs are:
    a. Copyrighted
    b. Patented
    c. Trade secrets
    d. All of the above

5. "Google's internal search algorithms" is an example of a:
    a. Copyright
    b. Patent
    c. Trademark
    d. Trade secret

6. Protection of intellectual property is rooted in:
    a. Both the U.S. Constitution and acts of Congress
    b. The U.S. Constitution, but not acts of Congress
    c. Acts of Congress, but not the U.S. Constitution
    d. Neither the U.S. Constitution, nor acts of Congress

7. Which of the following acts pertains to intellectual property developed by universities?
    a. Davis-Bacon Act
    b. Copeland Act
    c. Bayh-Dole Act
    d. Freedom of Information Act

8. A university research project supported by the federal government results in an invention. The university discloses the invention in a timely manner, elects to retain the rights, patents the invention, and follows other requirements set for the by the Bayh-Dole Act, codified in 37 CFR 401.
    a. The university and the inventor may receive some royalties from the invention.
    b. The university, but not the inventor, may receive royalties from the invention.
    c. The federal government retains exclusive rights to the invention.
    d. The federal government receives royalties from the invention.

9. The primary purpose of Bayh-Dole act was to:
    a. Ensure the rights of the federal government to patents supported by the government funds
    b. Ensure that patents are issued only for useful and novel inventions
    c. Stimulate further inventions and utilization of inventions to enhance the economy
    d. Ensure that patent applications are highly scrutinized

10. Bayh-Dole Act pertains to:
    a. Grants
    b. Cooperative agreements

c. Contracts
d. All of the above

11. Which federal agency is tasked with setting the regulations for the Bayh-Dole act?
    a. Department of Defense
    b. Department of Commerce
    c. National Science Foundation
    d. Department of Labor

12. For a university to claim title over an invention funded by a federal agency, which of the following must happen?
    a. The investigator needs to inform the university in a timely manner.
    b. The university needs to inform the funding agency in a timely manner.
    c. The university needs to inform the funding agency of its decision to retain the title and apply for a patent.
    d. All of the above.

13. Which of the following systems is used for a university to inform the federal agency about inventions?
    a. iEdison
    b. iInvent
    c. iHOP
    d. FedConnect

14. iEdison was developed by the _____ and stands for _____ Edison.
    a. NIH, international
    b. NIH, interagency
    c. NSF, international
    d. NSF, interagency

15. According to 37 CFR 401, to retain title to an invention created with federal funds, the university must disclose the invention to the funding agency within _____ from the date of invention.
    a. 1 month

b. 2 months
c. 6 months
d. 12 months

16. According to 37 CFR 401, to retain title to an invention made through federal funds, the university must inform the sponsor of its decision to retain the title within_____ from the date of disclosure.
    a. 3 months
    b. 6 months
    c. 12 months
    d. 24 months

17. According to 37 CFR 401, to retain title to an invention made through federal funds, the university must file a patent within_____ from the date it announced to the sponsor of its decision to retain the title.
    a. 3 months
    b. 6 months
    c. 12 months
    d. 24 months

18. If the university where the invention occurred does not abide by the Bayh-Dole Act requirements, the consequence will be:
    a. The university must pay three times the potential future royalties of the invention to the federal government.
    b. The federal government may take the title to the grant or give it to the inventor.
    c. The university may lose other patent claims as well.
    d. The inventor will take the title to the patent.

19. Under the America Invents Act (AIA) of 2011, patent rights go to the party who:
    a. Can prove that they were the first to have idea of the patentable technology
    b. Files the patentable technology first
    c. Can prove that they invented the patentable technology first
    d. Can prove that they shared the patentable technology for a useful societal benefit first

20. Utility patents stay in effect for:
    a. 20 years from the date of filing
    b. 20 years from the date they were issued
    c. 95 years from the date filing
    d. 95 years from the date they were issued

21. Patents may be issued for:
    a. Novel ornamental designs for an article of manufacture
    b. Discovery and asexual reproduction of plants
    c. Discovering a new medication
    d. All of the above

22. Pharmaceutical X makes a molecule that it believes will substantially enhance the survival of patients with melanoma. The company patents the molecule after some preliminary tests. It takes almost 12 years after patenting before Company X completes all pre-clinical and clinical phases of testing the drug, and FDA approves marketing the drug. How many years, at least, does the company have to make substantial money before the drug becomes generic?
    a. 3
    b. 5
    c. 8
    d. 20

23. Under the America Invents Act (AIA) of 2011, provisional patents:
    a. Were introduced for the first time.
    b. Were not permissible anymore.
    c. Could be filed much more easily and with less information.
    d. Could be filed but more information is required.

24. After filing provisional patents, the full (non-provisional) patents must be filed within:
    a. 3 months
    b. 6 months
    c. 12 months
    d. 3 years

25. Provisional patents provide the following benefit(s):
    a. Allow the applicants to claim priority when some of the data is coming within the next few months.
    b. Allow the applicants to advertise so that they gauge market interest in their patent.
    c. Allow applicants to avoid the full cost of application for full patents, if there is not enough interest in their product.
    d. All of the above.

26. The one-year considered for provisional patent _____count as part of patent's 20 years, and the provisional patent _____ provide full protection against a full patent filed during that period.
    a. Does, does
    b. Does, does not
    c. Does not, does
    d. Does not, does not

27. For something to be patentable in the United States, it should have all of the following characteristics EXCEPT:
    a. Novel
    b. Useful
    c. Not previously patented in the United States
    d. Published in a peer-reviewed journal

28. In the university context, who may potentially be an inventor and claim rights to a patent?
    a. Principal investigators
    b. Technicians
    c. Graduate students
    d. All of the above

29. A professor has conceived a novel and useful idea. Her postdoctoral fellow has come up with and described in detail methods to take the idea to practice. A technician has followed step-by-step orders to practice. Who has the claim to the patent?
    a. The professor, the postdoc
    b. The professor, the technician
    c. The postdoc, the technician
    d. The professor alone

30. In the context of intellectual property, “a pair of hands” means:
    a. An undergraduate student
    b. A graduate student
    c. A technician
    d. Someone who follows the order but does not put in substantial thought or expertise.

31. Unless requested by the inventors, a patent claim will be published _____ months after filing the full patent.
    a. 6
    b. 12
    c. 18
    d. 24

32. A patent may be:
    a. Licensed
    b. Bequeathed
    c. Mortgaged
    d. Any of the above

33. Cooperative Research and Technology Enhancement (CREATE) Act promotes collaborative research among:
    a. Universities, the public sector, and private enterprise
    b. The European Union and the United States
    c. The United States, European Union, Japan, and Australia
    d. Pharmaceuticals and the National Institutes of Health

34. Which of the following does NOT have a copyright?
    a. A poem published first in 2018
    b. A book published first in 1999
    c. A music record published first in 1981
    d. A great idea discussed in your class in 2012

35. A new poem is published. To make sure it is copyrighted, the author:
    a. Does not need to take any further action; it is automatically copyrighted.
    b. Must recite it to at least 10 people.
    c. Must use the © sign.
    d. Register the publication with the Library of Congress and use the © sign.

36. Adding the sign © for copyrighted books within the first 3 months of publication:
    a. Will add no value.
    b. Is necessary to establish copyright.
    c. Is not necessary to establish copyright but will help with securing statutory damages and lawyer fees for the copyright owner.
    d. Is not necessary to establish the copyright but will add 20 years to the years of copyright validity.

37. Copyright of a book that was written and published in 1990 by a single author is valid for:
    a. 14 years
    b. 20 years
    c. The life of the author
    d. The life of the author plus 70 more years

38. A scientific paper written by a US federal employee as part of her job:
    a. Is copyrighted to the US federal government.
    b. Is copyrighted to the author.
    c. Is copyrighted to the office in which she work.
    d. Does not have a copyright.

39. Who typically has the right to books published by university professors?
    a. The professor
    b. The department of the professor
    c. The university where the professor works
    d. It depends on whether grants were used, the university property was used, and what the institutional policies are.

40. "A word, phrase, symbol, or design that identifies and distinguishes the source of goods of one party from those of others" refers to:
    a. Copyright
    b. Patent
    c. Trademark
    d. Trade secret

41. Trademarks can remain valid for:
    a. 20 years
    b. 95 years
    c. 120 years
    d. Perpetuity, if renewed regularly

42. The Important University (TIU) provides a highly reputable service that wants to distinguish from others. TIU:
    a. Can develop a symbol for that service and add a © sign next to the logo.
    b. Can develop a symbol for that service and add an ® sign next to the logo.
    c. Must file an application with the US Patent and Trademark Office (USPTO). Once approved, TIU can add a © sign next to the symbol.
    d. Must file an application with the US Patent and Trademark Office (USPTO). Once approved, TIU can add an ® sign next to the symbol.

43. Trademark:
    a. Prevents competitors from providing similar services.
    b. Helps the customer know where the source of the service is.
    c. Is limited to 120 years.
    d. Must be registered with the Department of Commerce.

44. Trade secrets are best described as:
    a. Symbols that show where the source of good and service is from.
    b. Information that, if kept secret from others, generates value.
    c. Authored books, music, or other form of art in a memorialized in a tangible way.
    d. Information registered with the federal government that prevents others from using it for 20 years from the date of filing.

45. The value of trade secrets of a company may be lost if:
    a. The company owner discloses the information to some friends and they, in turn, spread the information.
    b. Another company discovers the secret using reverse engineering.
    c. What was a trade secret at one point becomes obvious because of scientific advances.
    d. Any of the above.

46. Trade secrets are typically protected by the:
    a. US Constitution
    b. Federal statutes
    c. Executive orders
    d. State laws

47. Universities typically:
    a. Maintain many trade secrets generated by federally funded research
    b. Maintain trade secrets generated by privately funded research
    c. Make substantial money from trade secrets
    d. Should avoid accepting contracts with companies that require maintaining the company's trade secrets

48. Universities engage in material transfer agreements (MTAs) because:
    a. The material may be infectious or hazardous otherwise
    b. The provider may want some royalties if patents are filed using the material
    c. The material may contain trade secrets
    d. Any of the above

49. Agreeing to MTA may cause problems when:
    a. Proper cautions are not taken to handle hazardous materials
    b. Trade secrets are difficult to keep
    c. Terms and conditions of the MTA are inconsistent with the sponsored project funded by another entity
    d. All of the above

50. Uniform Biological Material Transfer Agreement (UBMTA) was developed by the _____ in order to _____ .
    a. NIH, to standardize and simplify material transfers
    b. NIH, to preserve the rights of federal government to transferred materials
    c. CDC, to standardize and simplify material transfers
    d. CDC, to preserve the rights of federal government to transferred materials

51. UBMTAs are mostly used for transfer agreements between:
    a. Universities
    b. Universities and for-profit corporations
    c. For-profit corporations
    d. Non-profit and for-profit corporations

52. Non-disclosure agreements (NDAs):
    a. Are not acceptable to universities because of major liabilities
    b. Need to be scrutinized by universities for trade secret clauses
    c. Are standard and as such need minimal scrutiny
    d. Are acceptable to universities only when signed for non-profit organizations

9.7. Answers to Practice Questions

1. D Intellectual Property includes copyrights, patents, and trademarks, but not falsification. Falsification is the deliberate act of distorting or misrepresenting data, results, or information.

2. B Wegovy is protected by a patent, which gives Novo Nordisk exclusive rights and profit.

3. C Apple's logo is a trademark because it identifies the brand.

4. A Taylor Swift's songs are copyrighted, as they are original creative works.

5. D Google's internal search algorithms are trade secrets because they derive value from being kept secret. If others have similar information, they can use it to compete with Google.

6. A Protection of intellectual property is rooted in both the U.S. Constitution and acts of Congress. Article I, Section 8, Clause 8 of the Constitution, often called the Patent and Copyright Clause: "*The Congress shall have Power··· To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.*"

7. C The Bayh-Dole Act governs intellectual property developed by universities with federal funding. This is an example of intellectual property laws set forth by Congress.

8. A The Bayh-Dole Act allows both the university and inventor to receive royalties from federally funded inventions.

9. C The purpose of the Bayh-Dole Act is to stimulate further inventions and utilization to benefit the economy.

10. D The Bayh-Dole Act applies to grants, cooperative agreements, and contracts.

11. B The Department of Commerce, through the USPTO, sets Bayh-Dole Act regulations.

12. D To retain invention rights, the university and investigator must inform both the institution and the funding agency in a timely manner. They must also elect to retain title.

13. A Universities use iEdison to disclose inventions to federal agencies.

14. B iEdison was developed by NIH and stands for interagency Edison.

15. B Universities must disclose inventions to the funding agency within 2 months of discovery.

16. B Under 37 CFR 401.14(c)(2) (the standard patent rights clause), a university or contractor that wishes to retain title to an invention made with federal funds must notify the federal agency within six (6) months after disclosure of the invention to the agency.

17. C Universities must file for a patent within 12 months of electing to retain title. According to 37 CFR 401, the contractor – in this case the university – will file its initial patent application on a subject invention to which it elects to retain title within one year after the election of title.

18. B If requirements are not met, the federal government may take or reassign title of the invention.

19. B Under the America Invents Act, patent rights go to whoever files first.

20. A Utility patents last for 20 years from the date of filing.

21. D Patents may be issued for designs, asexual reproduction of plants, and new inventions.

22. C Patents are valid for 20 years. Therefore, after a 12-year approval process, Company X would have about 8 years left to make profit before generics would be allowed.

23. C The AIA allows provisional patents to be filed more easily and with less information.

24. C A full non-provisional patent must be filed within 12 months of the provisional application.

25. D Provisional patents allow priority, market testing, and cost savings, so they offer all these benefits.

26. B The one-year provisional period counts toward the 20 years, but it does not provide full protection.

27. D Patentable items must be novel, useful, and not previously patented, but publication in a journal is not required for patenting.

28. D In universities, professors, technicians, and students may all be inventors; it depends on their contribution.

29. A Both the professor (idea) and postdoc (practical method) are inventors; the technician is not. The technician only followed the rules, but did not contribute to the idea or reduction of the idea to practice. In this case, the technician's contributions are referred to as "a pair of hands".

30. D "A pair of hands" refers to someone who follows orders without intellectual contribution.

31. C Patent claims are published 18 months after filing unless inventors request otherwise.

32. D Patents may be licensed, bequeathed, or mortgaged, so all options are possible.

33. A The CREATE Act promotes collaboration among universities, public, and private sectors. Before the Act, joint research projects risked losing patent rights because prior art from collaborators could make an invention appear "obvious." The Act amended 35 U.S.C. § 103(c) to treat inventions made under a written joint research agreement as if they were made by a single entity—thus allowing collaborative partners to share technical knowledge without jeopardizing patentability.

34. D An idea alone does not have copyright protection unless fixed in tangible form. The first three were fixed in a tangible form (publication or recording), whereas the fourth one was not.

35. A Copyright is automatic upon creation; no further steps are required.

36. C Using © early is not required, but helps secure statutory damages and attorney fees.

37. D A book written in 1990 is copyrighted for the author's life plus 70 years.

38. D Works created by U.S. federal employees as part of their jobs are not copyrightable. For example, papers published by the NIH intramural researchers are not copyrighted.

39. D Ownership of professors' works depends on the use of grants, resources, and institutional policies.

40. C A word, phrase, or symbol identifying a good's source is a trademark.

41. D Trademarks can last indefinitely if renewed.

42. D To protect its service, TIU must file with USPTO and then use ® once approved.

43. B Trademarks help customers identify the source of goods or services. For example, the McDonald's sign shows where the burger is from. However, it does not prevent Burger King from providing similar services (e.g., selling burgers). Trademarks can be used in perpetuity, as long as they are renewed.

44. B Trade secrets are valuable information kept confidential to maintain advantage. An example is a "secret sauce" for a pizza.

45. D Trade secrets lose value if other people learn what they are. This may happen if they are disclosed, reverse-engineered, or made obvious.

46. D Trade secrets are primarily protected under state laws.

47. B Universities often hold trade secrets from privately funded research, not federal. While “B” is the best answer, “D” is a reasonable answer too. It is difficult for universities to keep trade secrets. Therefore, it may not be a bad idea to avoid dealing with companies that require maintaining trade secrets.

48. D MTAs are used because materials may be hazardous, contain trade secrets, or lead to royalties.

49. C Problems arise when MTA terms conflict with other sponsored project agreements.

50. A The NIH developed UBMTA to standardize and simplify material transfers.

51. A UBMTAs are mainly used between universities.

52. B Universities must scrutinize NDAs carefully, especially for trade secret clauses.