Exam No. _____

NONPROFIT TECHNOLOGY TRANSFER
FALL SEMESTER, 2003
FINAL EXAMINATION

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INSTRUCTIONS

This is a three-hour exam. There is no open book. The exam is separated into three parts, without time limitation as to any particular part. The attached answer sheets should be used for answers to Parts I & II. Blue books should be used for the essay questions in Part III. **Tip: Read the questions carefully☺**

PART I: TRUE/FALSE (15 QUESTIONS)

[Each correct answer is worth two points for a possible score of 30 points.]

Please identify the following statements as True or False (T/F) on the Part I answer sheet.

1. Although earning substantial royalty revenues is a major incentive for engaging in technology transfer, the real reason that U.S. universities establish technology transfer offices is Bayh-Dole.

2. It is fortunate that universities are in a position to require assignment of intellectual property by faculty as work-for-hire; otherwise, universities would always be in the undesirable position of having to negotiate with their own faculty for rights.

3. One of the complicating factors of government funding is the attachment of Bayh-Dole rights to all research results, despite the fact that private industry may have paid for most of the research.

4. Licensing has become the preferred method of transferring nonprofit technology to foreign companies because it does not require an export license.

5. If the cause of action leading to the case of *Technitrol, Inc. v. The United States*, (1971) had occurred after 1980 (the effective date of Bayh-Dole), the outcome of the case would no doubt have been different due to the definition of "subject invention" found in Bayh-Dole.

6. One of the reasons universities do not have to worry about antitrust issues is because they are not for profit. That means they are not subject to the Sherman Antitrust Act and other unfair competition laws which deal with commercial matters such as monopoly and price fixing.

7. Licensing "know how" in an effort to increase the overall value of a transfer of technology often causes a conflict in a university because of the inherent restriction on access that accompanies know how licensing.

8. While both NIH and NSF have developed conflict of interest policies that funding grantees need to recognize, state universities and their nonprofit research organizations are not subject to them because of 11th amendment sovereign immunity.

9. Because of the "hired-to-invent" rule that recognizes an employee's obligation to assign inventions to employers, the only way a university employee can avoid the obligation to assign is where the university waives its right to take title.

10. The most important reason for universities to negotiate rigorous due diligence milestone requirements in their licenses agreements is to ensure that the license can be terminated if the licensee goes bankrupt.

11. A university will be able to conduct a successful trademark licensing program as long as it is able to obtain an indemnification from all of its trademark licensees.

12. Most universities do not have a problem with a "reach through" licensing provision in material transfer agreement since Bayh-Dole would prohibit the university from honoring it in most cases and it means they can get access to a company's materials at no cost.

13. In weighing the advantages of taking equity in a start-up company instead of cash royalties, a university would have to consider that by taking equity it will not realize any income from the company for a number of years even though the company is selling products and making a profit.

14. The "Research Tools" issue has become so controversial that NIH has published regulations prohibiting the patenting of discoveries made by NIH grantees where the most beneficial use for the discovery is research.

15. Although the AUTM Annual Survey data reporting on licensing activity by nonprofit organizations is interesting, it would not be useful to rely on as an overall indicator of successful technology transfer.

PART II - MULTIPLE CHOICE (15 QUESTIONS)

[Each correct answer is worth 2 points for a possible score of 30 points]

There are 5 short hypotheticals, A-E, below. Each hypothetical tells a story, but each should be read independently of any other. Three questions, which may provide more information relative to the story, follow each hypothetical. Please choose **the best** answer to each question from the choices provided and mark your answer by placing a mark (X or √or ☺ or whatever) on the appropriate line on the answer sheet for Part II.

A. Icicles & More, Company ("I&M") has just read Greta Gradstudent's published thesis and from it has identified a product that it thinks will provide the company with an important, albeit small, market niche. Although the thesis is published, the company has proprietary technology that if combined with Greta's research will enable it to sell snowballs in July. The new business vice president gets your phone number from the AUTM website and calls you, a technology licensing officer at Northwind University, to discuss a commercialization partnership.

1. Based on the above fact situation, the most reasonable thing for you to do immediately is:

a. Search your office database to see whether Greta has submitted an invention disclosure relating to the research program
b. Call the Office of Sponsored Programs to find out who funded Greta's research.
c. Read Greta's thesis
d. Tell I&M that there is probably no protection for Greta's research because her thesis has been published

2. You are elated. It appears that Greta, in fact, has made a discovery that might be patentable. However, you are also aware that there are often details that are sometimes overlooked that can ruin a prospective deal. Of the following, one such detail would be:

a. Greta's research supervisor is a co-inventor
b. Greta posted a summary of her research findings on her website before the patent application was filed
c. Greta assigned the copyright in her thesis to the Journal of Frozen Ideas
d. During the summer, Greta worked for Freez-it, Inc., on research involving maintaining frozen food under warm temperatures.

3. As you continue to gather the information you need to begin negotiations with I&M, you find out that Greta is actually enrolled at Second-Best University, but was doing her research at Northwind because Second-Best does not have the

equipment she needed to carry out her research. I&M is not discouraged in its pursuit of license rights but recognizes there may be certain risks involved. As a solution, I&M offers to pay patent costs and to pay double the normal license issue fee. In return, I&M says it needs only an assurance from you by way of a warranty of title in order to go ahead with the deal. As anxious as you are to make the deal, you are reluctant to take the risk. As an alternative you might:

a. Use I&M's license issue fee to buy an insurance policy
b. Place a call to the Licensing Office at Second-Best to discuss licensing as co-owners of the patent
c. Removing Greta from the patent application as an inventor
d. Advise I&M to hire Greta as a research scientist

B. You are in-house counsel for Better Bytes, Inc., a software company that markets applications software to grocery stores to help with inventory. One of your directors, Kathy Keyboard, is on the faculty of Internet University, a world famous university for computer science and artificial intelligence. Kathy tells the company executives that there is a lot of interesting software being developed at Internet U. and perhaps it would be worthwhile for the VP of Commercial Development at Better Bytes to spend some time talking with the faculty and students at Internet U. to see whether there might be some software being written there of interest to Better Bytes.

1. As general counsel at Better Bytes you are aware of some of the issues surrounding software development at universities. Of major concern to you in considering the licensing of Internet U. software would be:

a. Whether the software is PC compatible
b. Whether the university was a state university and therefore can't be sued if things go wrong with the software when Better Bytes tries to license it
c. Whether the software had been properly debugged
d. Who are the authors

2. You have just found out that one of the Internet University software programs identified as being of interest to the company was funded by the federal government. Fortunately, because Better Bytes, although a small company, has had several contracts with the U.S. government, you are aware that developing software under government contract can pose some problems with respect to commercialization. You tell your CEO that the company will be best off if:

a. The software was developed with mixed funding
b. The Government has government purpose license rights to it
c. The software is patentable
d. Internet University will sign an agreement agreeing to maintain the software as a trade secret

3. You are aware that the software may need extensive modification before it is ready for the commercial market place, but Internet University's licensing officer is driving a hard bargain during negotiations. You have proposed alternatives of (i) a reduction in the royalty rate if more than 50% of the code is rewritten by Better Bytes; (ii) a fully paid up license after three (3) years of commercial sales; (iii) that Internet Univ. will develop the necessary modifications at its own expense; (iv) That the total royalty that Better Bytes will pay over the life of the license is $500,000. One of your suggestions has caught the interest of the University's licensing officer and she is considering it. It is:

a. (i)
b. (ii)
c. (iii)
d. (iv)

C. Debbie Dazzle, Esq., has taken a new job in the technology licensing office of Peerless University. She has been hired because she has graduated from Franklin Pierce Law Center with an LL.M. in intellectual property and, according to her resume, knows all there is to know about intellectual property. However, Debbie has not taken any courses having to do with educational institutions and technology transfer. That does not deter her, however, from her new assignment of revising the intellectual property policy for Peerless University – which was put together by faculty and is hopelessly out of date.

1. In addition to the out-of-date policy of Peerless University, in order to begin revising it, Debbie will need to consult all of the following except:

a. The University's Invention Assignment Agreement
b. The University's employment contracts with faculty and staff
c. Bayh-Dole
d. The *Sierra Club* line of cases

2. As Debbie decides how to handle the invention ownership issues that must be covered in the revised policy, she would be careless if she overlooked:

a. The ATP terms and conditions
b. The annual consulting reports submitted by faculty
c. Faculty agreements with publishers
d. Visitors

3. Although Debbie's credentials as an IP attorney are impeccable, in carrying out the task of revising the intellectual property policy at Peerless University, she is most likely to make a mistake with respect to:

a. Ownership of student materials
b. Work-for-hire
c. Royalty-sharing with faculty
d. Conforming the requirements of the policy with the terms of the assignment agreement

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D. Professor I. N. Stein has developed a piece of equipment that he believes will revolutionize stargazing. It is a considerable advancement over the ordinary telescope because it permits the user to fix the position of a star on a palm pilot which can then be recalled at anytime and shown to friends and colleagues without the aid of any device other than the palm pilot. He calls his new device StarBright. A company called Earth Galaxy, S.p.A., partially funded the research along with the National Aeronautics and Space Administration (NASA) and has notified you as the Director of Technology Transfer at Finest University where Prof. Stein is tenured, that it is interested in exercising its rights under the research agreement for a license. Prior to that, however, it would like a prototype of the device shipped to it for a sixty day trial with its own products. Earth Galaxy, S.p.A. is an Italian Company, located in Milano.

1. Considering Earth Galaxy's request, it is most appropriate for you to:

a. tell Earth Galaxy that you cannot ship the prototype because NASA owns the device
b. determine the cost of insuring the device during shipment
c. draft a material transfer agreement prior to shipping the device and send it to Italy for review
d. investigate whether or not an export license would be required to ship the prototype

2. Earth Galaxy's patent lawyer, P.T. Roma, has sent you a letter notifying you of Earth Galaxy's interest in acquiring an exclusive license to any patent covering the StarBright device. In responding to Mr. Roma's letter, you would:

a. Tell him that because any invention covering the StarBright device was partially federally funded and since Earth Galaxy is a foreign company, you will be unable to grant an exclusive license except to the company's U.S. subsidiary

b. Send him a copy of 35 U.S.C. 200-212
c. Tell him that Professor Stein has indicated that he wishes to form his own company and license any invention made under the research program and therefore no license is available for Earth Galaxy
d. Ask him whether Earth Galaxy also wants a license to the trademark, StarBright™

3. In reviewing the interests of the three parties that you have identified as having a stake in the outcome of any transaction to commercialize StarBright, that is, NASA, Earth Galaxy, S.p.A. and Professor Stein, you realize that you will have to do more homework if you are going to successfully manage the deal. Which of the following would you not have to review:

a. The Federal Technology Transfer Act of 1986
b. FAR §52.227-14
c. Finest University's Patent Policy
d. The research agreement between Finest University and Earth Galaxy, S.p.A.

E. Ivan Inventor, a distinguished professor at New Tech University, has made an invention that has caught the interest of others in his department of food science at New Tech. Ivan is about to disclose the invention to the Technology Transfer Office (TTO) at New Tech, but is approached by several other professors in the Food Science Dept. who wish to know if he has thought about starting a company to commercialize his invention. Professor Inventor is far more interested in pursuing his academic research and teaching students than he is in amassing wealth, but tells his colleagues that he will talk with the TTO to see whether licensing the invention to a start-up is feasible. Consequently, Professor Inventor comes to your office in the TTO to investigate the possibilities.

1. Upon doing rigorous due diligence, you find out that (i) the invention has been funded by the federal government; (ii) Prof. Inventor is most likely a sole inventor; (iii) the invention is most likely patentable; and (iv) the New Tech policy will permit licensing to start-ups. In addition to the above factors, the other major factor that would weigh in your decision to grant a license to the start-up is:

a. Whether Ivan Inventor is willing to play an active role in the start-up
b. Whether Professor Inventor is willing to accept equity as the inventor's share of royalty revenues
c. Whether the Manchester Union Leader will publish a story exposing the licensing of the start-up as a conflict of interest
d. Whether the federal agency funding the research will approve it

2. One of the most difficult issues to resolve in licensing a start-up company is that of consideration for the license. As a licensing officer with some experience in start-up licensing you know "all-equity" deals generally have mixed results. The factor that would most likely weigh in favor of an all-equity deal is:

a. Professor Inventor's willingness to forego cash royalties for equity.
b. A memo you have received from the University Provost supporting an all-equity deal.
c. Investors willing to put $5,000,000 into the company to start with.
d. The Investors' willingness to provide the University with anti-dilution protection through the second round of financing.

3. Although several of the factors look positive for success of the venture, there are other factors that you have recently become aware of. They are (i) that Professor Inventor and two colleagues will submit a proposal to the National Science Foundation for new research funding; (ii) that 3 professors in his department have told him they will buy stock in the company if it is successful; (iii) that one of Professor Inventor's graduate students will go to work for the company upon her graduation; (iv) that New Tech University's Endowment Officer is Professor Inventor's brother-in-law. Before finally approving the licensing of Professor Inventor's start-up, you advise the University President that:

a. The graduate student should be prohibited from joining the company
b. The University should not purchase stock in the company in the future
c. Professor Inventor's colleagues in the department should make an annual disclosure of all of their financial holdings so if they buy stock in the company everyone knows it
d. Professor Inventor should be barred from submitting his proposal to NSF

PART III – ESSAY (CHOOSE 2 OUT OF 4)

The essays will be scored on the basis of 0-10 points and each will count for 20% of your exam grade. Since the essay portion of the exam accounts for 40% of your score, it will be important to consider the topics you choose to discuss carefully and to be as complete in your discussion as you can. Please use your bluebooks and be sure to record the number of the essay question you are responding to.

Question 1: Professor Terry Tycoon has formed a consulting relationship with Acme Solutions, Inc. Acme has agreed to pay Prof. Tycoon a monthly retainer of $12,000 to work on projects that Acme feels are within the Professor's area of expertise – that of developing pesticides to eradicate fireflies since they are annoying to campers who are trying to sleep. Acme is so anxious to produce a product that it is also willing to fund a research project at the university aimed at firefly annihilation. As University intellectual property counsel, you are contacted by the head of Professor Tycoon's department who is concerned about both a conflict of interest and confusion over intellectual property rights that might arise if Professor Tycoon is named principal investigator under the research program. You agree to provide the Department Head with a memorandum advising as to your conclusion. Please choose to answer **either** (a) or (b) below.

(a) You advise that there are issues with the proposal but with certain safeguards the project can go ahead. The memo should set out the issues that you see both with conflict of interest and the intellectual property rights and should provide the Dept. Head with guidelines for resolving them.

(b) You advise the Dept. Head against proceeding with the proposal. In the memo you will set out both the conflict of interest and intellectual property issues and your rationale for advising against the project.

Question 2: 21st Century University ("21st C.U.") has decided that since it is about to receive its first funding for research from the U.S. government, it needs to set up a technology transfer office in order to comply with Bayh-Dole. The University has not yet developed the procedures and forms that will be needed for implementation of Bayh-Dole requirements. You have been hired as a consultant to help 21st C.U. with this project. From your course at FPLC, one of the forms you know will be immediately needed is an invention disclosure form. Please describe in a memo to the Provost the information that will be needed for a comprehensive intellectual property disclosure form that will comply with Bayh-Dole and other reasonable requirements needed for the operation of a technology transfer program.

Question 3: Premier, Inc. has entered into a sponsored research agreement with Old Reliable University. Under the agreement Premier will fund research in Dr. Scholar's laboratory for three years at a cost of $100,000 per year. The terms of the agreement grant Premier an option to negotiate licenses for new inventions developed during the research program and improvements dominated by patents on the inventions (if any) for a period of five years after the research program terminates. The university licensing office has agreed to a provision in the research agreement that establishes both equity and royalties as the basis for negotiating the royalty terms of any license. In addition, Dr. Scholar accepts a position as a consultant at Premier to facilitate communication between the University and Premier. As part of his annual retainer, he will be issued company stock.

To enhance the possibility of break-through research, Dr. Scholar submits a funding proposal to NIH for a multi-year research program to investigate a second phase of the research that will be funded by Premier. The research programs will proceed simultaneously and Dr. Scholar agrees to keep the Vice President of New Products at Premier advised of the progress of the NIH research, in the event it is funded.

Although this arrangement is not altogether without possibilities, there are several issues that would have to be resolved before it is acceptable to Old Reliable's Vice President for Research ("VPR"). You have been asked to write a memorandum to the VPR describing for her the issues as you see them and how they might be resolved to permit the relationship between Premier and Old Reliable Univ. to flourish.

Question 4: The faculty at your university have become frustrated with your office of intellectual property counsel because you are holding up a number of material transfer agreements that you consider to contain unacceptable terms. The faculty, post-docs and graduate students do not understand the issues. They see only that there are important materials available from industry that are needed for their research and you are preventing them from getting access to those materials.

In an effort to win the cooperation of the faculty, you prepare an outline to send to them setting out the issues that commonly arise in industry MTAs, explaining to them why these issues are detrimental to their overall research and what terms are acceptable to the university. Please prepare the outline in such a way as to clearly identify the issues, explain the consequences of accepting industry's terms and what terms would be acceptable to the university in substitution. Remember, you are trying to win over the hearts and minds of the faculty and researchers.

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ANSWER SHEET – PART I

PART I. Please mark True/False (check one)

	T	F
1.	___	___
2.	___	___
3.	___	___
4.	___	___
5.	___	___
6.	___	___
7.	___	___
8.	___	___
9.	___	___
10.	___	___
11.	___	___
12.	___	___
13.	___	___
14.	___	___
15.	___	___

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ANSWER SHEET – PART II

PART II – Multiple Choice (check one)

A. 1	a.___	b. ___	c. ___	d. ___
A. 2	a. ___	b. ___	c. ___	d. ___
A. 3.	a. ___	b. ___	c. ___	d. ___
B. 1	a. ___	b. ___	c. ___	d. ___
B. 2	a. ___	b. ___	c. ___	d. ___
B. 3	a. ___	b. ___	c. ___	d. ___
C. 1	a. ___	b. ___	c. ___	d. ___
C. 2	a. ___	b. ___	c. ___	d. ___
C. 3	a. ___	b. ___	c. ___	d. ___
D. 1	a. ___	b. ___	c. ___	d. ___
D. 2	a. ___	b. ___	c. ___	d. ___
D. 3	a. ___	b. ___	c. ___	d. ___
E. 1	a. ___	b. ___	c. ___	d. ___
E. 2	a. ___	b. ___	c. ___	d. ___
E. 3	a. ___	b. ___	c. ___	d. ___