Exam No. _____

NONPROFIT TECHNOLOGY TRANSFER
FALL SEMESTER, 2004

FINAL EXAMINATION

Karen Hersey, Visiting Professor

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. It is true to say that in universities making the correct ownership determination will depend upon making the correct inventorship determination.

2. Potential adverse tax consequences to universities that engage in the transfer of technology through the licensing of intellectual property are more often related to the taxation of royalty revenue than to loss of a university's tax exemption.

3. A federal agency wishing to avoid the application of Bayh-Dole to a particular university research grant or contract that it issues, will declare a "march-in".

4. It is true that companies sponsoring research at a university are legally entitled to a minimum of a royalty-free, non-exclusive license to inventions as consideration for having paid for the research program.

5. It is better to negotiate a lump sum fully paid-up royalty for a patent license than a running royalty because the patent may never issue and a running royalty may never be paid.

6. If S, who is married to PI, owns a majority share of a start-up company that would benefit from PI's NIH-funded research, NIH regulations would require S's interest to be disclosed by PI when his research proposal is submitted to NIH, even though the start-up company has only $4,000 in its bank account.

7. University intellectual property policies that claim ownership of all faculty copyrightable works as work for hire are justified in doing so because the university is paying faculty members' salaries.

8. If Patty Professional were licensing software under a copyright license rather than a patent license, a main difference in the license would most likely be in her treatment of licensee improvements.

9. The best way for universities to avoid violating the NIH guidelines on research tools is not to patent discoveries that are important to carrying out scientific research.

10. If Popeye, a university professor, makes an invention for a strain of spinach that is pink, not green, in color, it will be a conflict of interest for him to accept a consulting contract from the company licensed to the pink-spinach invention.

11. A "reach through" right as a condition imposed under a material transfer agreement is troublesome for universities only if honoring it results in a Bayh-Dole violation.

12. A negotiator for a company licensing a university invention would be unwise to negotiate the license with the inventor.

13. Successful marketing of university inventions tends to be difficult since most of them are not reduced to practice due to the fact that applied research creates tax liability for the nonprofit university.

14. The recent decision by the CAFC in the ***Madey v. Duke*** case poses lesser risk to state universities than it does to private institutions

15. While start-up licensing can be financially rewarding, all-equity deals are risky unless the university is guaranteed a seat on the start-up's Board of Directors.

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. Warbler University ("Warbler U.") and Ugly Duck, Corporation ("UDC") have executed a license agreement covering Professor Woody Duck's invention for a battery-powered mating call system that Prof. Duck says is guaranteed to lure male ducks to a specific location. One of the diligence requirements in the license requires UDC to fund research at a level of $100,000 annually for three years in Professor Duck's laboratory. This requirement was acceptable to UDC since Professor Duck is a consultant to the company. Under the terms of the research agreement, UDC will receive an option to negotiate licenses to new inventions resulting from the research and to any improvements dominated by the patent (if and when it issues) over a five-years term. The Audubon Society ("the Society") has expressed an interest in using the technology to track loon populations. The Society would like to fund loon-related research under a program cost-shared by the U.S. Department of Agriculture ("USDA") and has asked Professor Duck to submit a proposal to do the research.

A-1. In advising Warbler U's Director of Sponsored Programs whether Professor Duck should be permitted to submit a proposal for the Society-USDA research program, Shirley Sharp, Esq., Warbler U's Intellectual Property Counsel, should:

a. Ascertain whether Prof. Duck's consulting relationship with UDC earns him more than $10,000 per year
b. Tell Prof. Duck to terminate his consulting relationship with UDC
c. Suggest that the proposal be submitted by Professor Sue Swan instead of Professor Duck.
d. Require Prof. Duck to disclose the Warbler-UDC relationship to the Society and the USDA when he submits his proposal

A-2. In considering the conduct of the research program funded by UDC, Shirley Sharp might also advise that:

a. Students participating in the research program be notified of Professor Duck's association with UDC, if any
b. Professor Duck keeps the research results confidential to ensure that all possible patent applications can be filed to protect UDC and Warbler U interests

c. Warbler U should sign-off on Professor Duck's UDC consulting agreement for the purpose of pre-determining invention ownership
d. In view of the growing relationship between Warbler and UDC, Warbler's treasurer should look into acquiring shares of stock in UDC

A-3. Considering the variety of financial and technology interests expressed by Warbler, UDC, Professor Duck, and the Society, the most effective way for Shirley Sharp to accomplish an outcome satisfactory to all interests is to:

a. Call UDC's legal representative and tell her the license agreement needs to be renegotiated
b. Tell the Society and the USDA that their research can be funded only if all parties agree that no patent applications will be filed
c. Suggest the Society and the USDA fund a similar research program in Professor Swan's laboratory
d. Advise the Society to approach UDC with a proposal for joint sponsorship of the research

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B. While idly sitting in your cubby in the technology transfer office at Cando University waiting for the phone to ring, you get a call from Mr. Wall Street, Esq., an in-house corporate lawyer for Highflying Toy Corporation. The company has learned of an adhesive invention made by two graduate students at Cando, Fred Frick and Freda Frack. The Frick & Frack invention is of interest to Highflying Toy because it will allow the company to monopolize the toy market in unbreakable model glider airplanes. Wall Street tells you that he has been tasked with getting the particulars on the invention and, if the invention looks promising, negotiating a mutually acceptable license agreement. This call has "made your day". After telling Mr. Street you will get back to him shortly, you set about preparing a prioritized checklist of steps you need to take before beginning negotiations with the company.

B-1. The first item on your checklist will be:

a. To order a Dunn & Bradstreet Report on the finances of Highflying Toy
b. To send Frick & Frack an invention disclosure form
c. To check to see whether either Frick or Frack is a government employee
d. To call Frick and Frack's thesis supervisors to see if either or both wishes to be listed on the patent application as a co-inventor

B-2. As you go about gathering the information that you need to begin your negotiations, you are most concerned that complications could arise because:

a. Fred Frick holds Dutch citizenship
b. Highflying Toy may come under Department of Justice review for an anti-trust violation

c. No one can find copies of the university's invention assignment agreements executed by the students
d. No one is certain where the materials used in reducing the Frick & Frack invention to practice came from

B-3. Assuming all Cando University's concerns relating licensing of the Frick & Frack invention are resolved in its favor, as you consider the license terms you will present to Highflying Toys, you will be uncompromising in requiring:

a. non-exclusivity
b. a license issue fee
c. follow-on research funding
d. a royalty audit right

C. Professor Peter Plow has been working in the area of potato crop research for many years. He has a passion for potato farming and because he teaches at the University of Maine is fortunate to have his own potato field growing in his back yard. He often uses his home potato patch for experimenting with new genetically-engineered materials that he has developed in his laboratory at the University. Finally, one day his efforts pay off. A new strain of potato is germinating in his backyard patch. He has successfully spliced a gene into its roots that will eliminate most of the starch in potatoes. Consequently, this starch-reduced potato strain has the potential for removing potato consumption from a list of suspected contributors to overweight Americans. Professor Plow is aware of the University of Maine's patent policy requiring invention assignment to the University under certain circumstances. However, he believes the policy does not apply in his case. Besides, he has heard that the University's technology transfer office is underperforming and contacting the office is a waste of time.

C-1. Professor Plow would most likely be correct in his conclusion regarding the application of the University's policies if:

a. He has never signed the University's intellectual property assignment agreement (IPAA)
b. The University's patent policy has not been accepted by the faculty
c. He did not use sponsored research funds to make the discovery
d. Both the conception and reduction to practice of the invention occurred in his home potato patch

C-2. As the University's IP counsel, your most effective argument for convincing Professor Plow to assign his invention to the University will be:

a. It is a subject invention with a close and umbilical relationship
b. The invention was work for hire

c. Professor Plow's duty of loyalty to the University as his primary employer
d. His invention is an improvement to a patent the University already holds on the genetically-engineered materials that he used

C-3. Because the Professor has raised the issue of ownership, it will be prudent for the University to:

a. Offer Professor Plow 50% of royalty revenues if he will assign the invention
b. Withhold Professor Plow's paycheck until he assigns the invention
c. Conduct a review of prior like-decisions made by the University
d. Send the University's groundskeeper out to plow under the Professor's potato patch

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D. Harry Hacker and Dora Dell are bachelor degree students at Internet University, a research university with an advanced curriculum in computer science. Because of its reputation, Internet U continuously receives grants and contracts from the federal government, as well as from industry, to do advanced research on computer architecture. One such project is being conducted in the laboratory of Professor O.N. Lyne. Harry and Dora like to spend time in Professor Lyne's laboratory trying to see whether they can break the codes that Professor Lyne and his graduate students are developing under the research program. Professor Lyne does not object to the students' efforts because he believes the fun they are having will actually produce a more secure architecture and that will make his research sponsor happy.

D-1. Professor Lyne should be most concerned about the activities of Harry and Dora because:

a. They may violate the anti-circumvention prohibitions of the Digital Millennium Copyright Act of 1998 (DMCA)
b. Harry and Dora are unpaid students
c. Harry and Dora both have jobs next summer at Intel Corporation
d. Dora's dad is Michael Dell's brother

D-2. Professor Lyne's research sponsor should be most concerned about the activities of Harry and Dora because:

a. Neither Harry nor Dora has signed a non-disclosure agreement
b. Harry and Dora are charter members of the Free Public Access Software Society (Free-Pass)
c. Harry Hacker is a Swedish citizen
d. Harry and Dora may be authors

D-3. As a software licensing officer at Internet U, your primary concern that the activities of Harry and Dora could impact your licensing opportunity is that:

a. The sponsor of Professor Lyne's research project is the Department of Energy (DOE)
b. Safe Software Corp., the sponsor of Professor Lyne's research, has a non-exclusive license to any invention made by university employees under the research program.
c. Internet U's policies on student academic freedom allow Harry and Dora to publish whatever they wish
d. Harry and Dora are transfer students from World Wide Web University

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E. Dennis Dealmaker, Esq. has just joined the licensing staff at Best Technology University (Best Tech) having left his job at Competitive Corporation (CCorp) because the job of licensing attorney there was too stressful. Because he has been licensing for many years at CCorp, he feels he is well-positioned to handle any challenges he might face at Best Tech. His first opportunity has appeared on his desk as a term sheet from Biomarker, Inc., an existing company interested in licensing a new protein identified by Professor Don Dabbler that is useful to indicate a greater or lesser tolerance for cold weather in certain genes regulating body temperature. Dennis is convinced that this invention is of great value because it will help identify the northern population of the U.S. that may be pre-disposed to moving south for the winter. Dennis foresees the invention will be important to many different sectors of the economy from construction to travel to home heating.

E-1. Among the terms submitted by Biomarker, Inc. are (i) a life-of-the patent exclusive license; (ii) a right of first refusal to fund any improvement research in Professor Dabbler's lab; (iii) freedom to operate (FTO) with respect to any Best Tech technology needed to make use of Professor Dabbler's invention; (iv) a warranty of title or right to license; (v) an infringement indemnification obligation from Best Tech and (vi) two-years of consulting from Professor Dabbler. If Dennis asks his colleague and long-time licensing officer, Sue Safedeal, which of these terms he should reject as non-negotiable, she would most likely tell him:

a. (ii) and (v)
b. (i) and (iii)
c. (iii), (v), and (vi)
d. All of them

E-2. If Professor Dabbler's invention has been funded by NIH, and qualifies as a research tool, Dennis needs to be careful to:

a. Get NIH's permission to issue the license to Biomarker
b. License only non-exclusively

c. Forego patenting and license under a material transfer agreement
d. None of the above

E-3. In determining what royalty he should put into the term sheet, Dennis will probably be most successful in getting a positive response from Biomarker if he:

a. Uses in his calculations the amount Biomarker would have spent on the research if it, instead of NIH, had funded the invention, plus 25% profit.
b. Finds comparables
c. Asks Biomarker to suggest a royalty rate and then triples it
d. Offers a fully paid-up license in exchange for a 5% equity position in the company as of the day the license is signed.

PART III – ESSAY (CHOOSE 2 OUT OF 3)

Each essay will be scored on the basis of 20 maximum 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 carefully and to be as complete in your discussion as you can. Please use your bluebooks to prepare the materials that are requested by the topics presented, and be sure to record the number of the topic you are discussing. Since you will be graded only on the first 2 essays you write, responding to more than two will be a waste of your time ☺.

Topic 1: You have received a call asking if you will make a presentation at the AUTM Annual Meeting on the subject of University Intellectual Property Policies, the "Good, the Bad, and the Ugly". Fortuitously, you have just completed a survey of university policies as part of a project in your own university concerned with updating its policy. You are delighted at this opportunity to make a name for yourself at AUTM, but are realize that presentation of the topic is going to be a challenge. You know that you will have to both give examples of good, bad and ugly treatments in various policies and explain to your audience the rationale behind the good, bad and ugly ratings. Deciding to organize your powerpoint presentation by topical headings, and relying both on the research you have done and your experience at your university, you decide to discuss 4 main categories: (i) Intellectual Property Covered; (ii) Ownership; (iii) Who is covered by the policy; and (iv) Faculty obligations.

☺ **Your task for Topic 1 is to develop a first draft of the overheads you will use**

Topic 2: Professor Sammy Slugger teaches and does research for Home Run University (HRU) in the field of sports medicine. In addition to teaching undergraduate courses, he supervises students pursuing doctorate degrees in sports medicine in his laboratory (Sports Lab). A major research program in Sports Lab is funded by a consortium of baseball teams interested in the development of new materials for baseball gloves that will better protect players' hands against small bone fractures. One of the teams, Kool Kats, believes it would benefit from signing Professor Slugger to a consulting contract. Kool Kats is aware of the likelihood that the research in Sports Lab will result in the development of a new material and, under the consortium agreement, the team, along with the other sponsors, is entitled to a license to any invention. Kool Kats realizes the team will gain a competitive advantage if it can hire Professor Slugger.

Consulting agreement in hand, Professor Slugger comes to your office as HRU's general counsel seeking advice on whether or not he should sign up with Kool Kats. Among the terms of the agreement are (i) all inventions, copyrights, ideas, discoveries, know-how and information developed by the Consultant (Slugger) during the term of the consultancy are the property of Kool Kats; (ii) the Consultant shall keep all information learned during his consultancy in confidence; (iii) the Consultant shall not carry on like activities for any other organization or entity during the term of his consultancy; (iv) the Consultant warrants that all intellectual property developed by him pursuant to his consultancy is original and noninfringing; and (v) the Consultant shall be paid an annual fee of $25,000 for his one day a week services. The Professor tells you that his son is ready for college and the consulting fee would be very helpful since it would almost pay the yearly tuition.

You tell Professor Slugger that you will get back to him with a memo that points out the issues with the arrangement suggested by Kool Kats from the perspective of HRU and, while you are not sure you can "make it happen", you will do your best to make suggestions for resolving the issues presented both by the agreement and by the proposed relationship with Kool Kats.

☺ **Your task for Topic 2 is to prepare the memo to send to Professor Slugger**

Topic 3: Professor Zelda Zeal has made an important discovery in the course of her government-funded research program. She is aware of the university's policy of sharing 50% of the university's net revenues from commercialization of inventions and is urging the technology transfer office at High Point University (High Point) to put the invention out for bid and take the best offer. She believes that High Point has a contractual obligation to do just that since she has assigned her invention to the university with that understanding. Snake Oil Corporation has approached the university with a proposal under which (i) High Point would assign all right, title and interest in and to Professor Zeal's invention to Snake Oil; (ii) in consideration, Snake Oil would

pay the university a lump sum fully paid-up license fee of One Million Dollars (US $1,000,000); (iii) in view of the one million dollar payment, the university would be responsible for reimbursing all patenting costs spent by Snake Oil after the assignment of the invention; (iv) Professor Zeal would become a consultant for Snake Oil for a period of five (5) years in return for a warrant to purchase 1,000 shares of stock in Snake Oil annually at the price the stock was being traded on the day of the signing of the agreement; and (v) the university would agree that any improvements to the invention made by Professor Zeal over the next five (5) years would also be assigned to Snake Oil at no additional royalty or fee. Professor Zeal is elated at the prospect of adding $500,000 to her retirement accounts and urges you to take the deal or else . . . .

It is clear to you that for a variety of reasons the proposal by Snake Oil is not acceptable. You are going to have to prepare a memorandum for Professor Zeal explaining why the Snake Oil deal cannot be accepted by the university and, in order to soften the blow, you will go further and suggest alternative terms that would be acceptable to High Point. In addition, you decide you had better copy the Vice President for Research on the memorandum in the event there is a legal challenge coming from Professor Zeal.

☺ **Your task for Topic 3 is to write the necessary memo to Professor Zeal**

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ANSWER SHEET – PART I

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

	True	False
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.** ___