Answers must be e-mailed within 24 hours of receipt to: m.sinha@northeastern.edu, with cc: to michael_sinha@hms.harvard.edu

The examination mode is Take Home and has three parts, each with a separate word limit. The word limit for Question 1 is 2,000 words. The word limit for Question 2 is 1,000 words. The word limit for Question 3 is 500 words.

For purposes of grading, the relative weight of each question is proportional to its word limit. Please put your word count (in parentheses) at the end of your response to each question.

For Question 2, you have a choice between two prompts as the basis for your response. You are to respond to one and only one of these prompts. Please indicate which response you have chosen by including the designation “2A” or “2B” at the start of your response.

The examination is open-book. In general, you may use any pre-existing materials in completing the examination, but you may not consult with, or receive help from, another person regarding the examination’s subject matter.

Please put your 5-digit Exam ID in the header so it appears on each page. Please submit your answers in Word format (NOT as a PDF)

Good luck!
**Question 1: 2000 words or less**

Jane Jangler is a mechanical engineer in Missoula, Montana. In her spare time, Jane participates in a musical group called the “Red Redfish” that has six members in total. In this group, Jane excels as a player of the cowbell, the wood block, and the tambourine. The cowbells Jane has played have all been shaped roughly like the frustum of a four-sided pyramid (i.e., like a shape generated by cutting off the top of a pyramid). See Figure 1 for a representation of such a cowbell.

**Figure 1**

![Diagram of a cowbell with labeled parts: Cap, Side Edge, Side Seam, Side]

In playing the cowbell, Jane tends to strike it with a wooden stick on an edge of the bell lying at the intersection of two sides. See Figure 1 for the indication of such an edge. The bells that Jane used prior to 2011 were made of three pieces of metal welded together. One piece of metal was the cap portion forming the top of the bell. See Figure 1 for an indication of the position of such a cap. The other two pieces were side portions that were welded together along two seams running through the middles of opposite sides of the bell. Figure 1 shows the position of such a side seam.

In February 2009, Jane noticed that, after about two years of use, vigorous striking of such a cowbell tended to cause the welded side seams to weaken to a degree that the quality of the sounds produced by the bell was often negatively affected. Jane began thinking of how to construct a cowbell to limit the problem of weakening of side seams. By mid-November 2010, Jane observed that, if she had for several months consistently struck a bell only on one specific side edge, the side seam nearer to that edge evidenced noticeably more weakening than the side seam farther from that edge. By January 8, 2011, Jane had the thought that a way to increase the distance between the “striking edge” of a cowbell and the nearest side seam would be to
construct the sides of the cowbell from only one, rather than two, initially separate pieces of metal. This single piece of metal could be wrapped to form all the sides of a cowbell, with only a single side seam being needed to hold the sides together. Jane thought that, if she constructed such a bell and then struck it only on either of the side edges most distant from the single side seam, she could reduce, if not eliminate, the problem of seam weakening that she had experienced with other bells.

On March 1, 2011, Jane completed construction of a homemade cowbell in accordance with the design of January 8, 2011—i.e., a cowbell made from only two welded pieces of metal (a cap portion and a side portion) and having only one side seam. At the time of construction, Jane did not know whether this “Jangler bell” would help avoid the problem of long-term seam weakening that she had observed with other bells.

During the remainder of 2011, Jane practiced playing the Jangler bell at home multiple times each week, always striking it on one of the side edges farthest from the single side seam and regularly inspecting it for seam weakening. Further, to help make sure the bell could withstand something more assuredly like the sort of playing that would occur in a public performance, she brought the Jangler bell to three 2011 practices for the Red Redfish that were held in the basement of another member’s house. During the performance of various songs at these group practices, Jane struck the Jangler bell, always hitting it on one of the side edges farthest from the single side seam. During the practices, Jane always kept the Jangler bell with her person, and she was the only person who ever touched or struck the bell. Jane likewise kept a careful and exclusive hold on the Jangler bell when, again concerned about the potential distinctiveness of her use of the bell in a public performance context, she used the bell for the first time in a performance before someone other than the band itself, a performance that occurred when the Red Redfish provided musical entertainment for two hours on the night of Wednesday, November 16, 2011, at the Flat Tire, a bar in Missoula. During the Flat Tire performance, Jane exclusively struck the Jangler bell on one of the side edges farthest from the single side seam. The Red Redfish and its members received no compensation for the performance, during which about a dozen other people heard and saw Jane play the Jangler bell.

In 2012, Jane continued to use the Jangler bell in the same manner as she had in 2011, again using the bell during another unpaid performance at the Flat Tire, this time on Wednesday, August 22, 2012. On January 12, 2013, Jane observed that, atypically for bells that had
undergone such use over a period of almost two years, the Jangler bell showed no sign of side-seam weakening. That same day, as recorded in dated notes written by Bob Bronzely, a patent attorney, Jane remarked to Bob that she had succeeded in designing a metal cowbell that withstood striking better than typical cowbells. Jane asked Bob to help her file a U.S. patent application. With Bob’s aid, Jane filed an application for a U.S. patent on her cowbell design on March 11, 2013.

Jane’s application suffered no rejections from the U.S. Patent and Trademark Office (USPTO) and issued on September 4, 2014. Jane’s issued patent includes one claim, which reads as follows:

1. A musical instrument comprising
   a first integral piece of metal in the form of a sheet bent into an open-ended, frustum-like shape by bringing edges of the sheet into close proximity with each other and connecting those edges by a single welded seam; and

   a second integral piece of metal attached to the first piece of metal to form a cap for the open-ended, frustum-like shape formed by the first piece of metal.

Further, the specification of Jane’s patent includes the following passage:

The sides of a bell in a frustum-like shape—herein defined as a shape in which the base is substantially wider than the top—have commonly been formed by welding together two separate pieces of metal along two seams running the length of sides of the bell. A cap for the bell is then formed by welding another piece of metal to an end of the frustum-like shape, an end otherwise left open by the bell’s sides. The present invention eliminates the need for two seams running the length of such a bell’s sides by forming these sides from a single integral piece of metal, rather than the two separate pieces of metal found in prior art. An object of the invention is to enable a frustum-shaped bell to better withstand repeated, forceful striking on a side edge with a hard object.

On October 3, 2014, Jane became aware of a new cowbell manufactured by Instruments for Music Corp. (IMC), a leading manufacturer of musical instruments that is headquartered in Canada. The IMC cowbell is a frustum-shaped bell that has only one side seam. Indeed, the entirety of the IMC cowbell, including both its cap and sides, is formed from a single piece of metal that starts out flat before being bent in multiple ways to form a bell shape, complete with a cap, which shape is welded together along two seams: (1) a single side seam and (2) a top seam that runs between portions of the cap and side edges originally separated from the cap. See Figure 2 for a representation of such a single piece of metal before it is folded to form a
frustum-shaped bell. As indicated in Figure 2, before folding of the single piece of metal to form the bell, there is separation between edges of the cap portion and other edges that will be welded to those cap edges. This separation facilitates the process of folding the single piece of metal to form the frustum-shaped bell by allowing the separated side edges and associated side material to move more freely relative to the cap portion and part of the side portion at or in close vicinity to points of original connection between the cap portion and side portion.

Figure 2

With help from Bob Bronzely, Jane sent a letter to IMC on October 10, 2014. This letter described Jane’s patent and noted associated characteristics of IMC’s new cowbell.

Jane recently received a reply letter from IMC. The reply indicated that IMC had independently developed its new cowbell after one of its instrument-design engineers, Daniela Dillinger, came up with the idea for the new cowbell’s design on June 15, 2013. Like most of IMC’s instrument-design engineers, Dillinger had over ten years of experience in instrument design for a variety of different types of musical instruments, including both metal percussion instruments and metal wind instruments.

In devising the new IMC cowbell, Dillinger had drawn specific inspiration from one of her previous designs for a wind instrument: a metal flute whose cylindrical shape was formed by wrapping a single piece of metal into a cylinder, with opposing edges of the wrapped metal being welded together along a single metal seam running down the length of the flute. The
Dillinger flute’s width was constant along its length: the diameter of its circular cross section was exactly the same at the flute’s top and bottom. The Dillinger flute’s bottom was open, but its top was closed with a circular cap of metal welded to the top edge of the sides. A physical embodiment of the Dillinger flute was never made, but on Dillinger’s behalf, IMC filed a U.S. patent application for the Dillinger flute on September 13, 2010, and, although the application has not yet resulted in an issued patent, the application was published without amendment by the USPTO on March 13, 2012. In addition to describing the structure of the Dillinger flute, the IMC application notes that construction of a flute’s sides from a single piece of wrapped metal, rather than multiple pieces of metal, commonly serves interests in sturdiness and durability.

Jane has asked Bob Bronzely what her chances would be in a suit against IMC for infringement of her patent. Bob has asked you to draft a memorandum of no more than 2000 words analyzing the prospects for findings of infringement and of no invalidity on grounds of lack of novelty, a §102(b) statutory bar, or obviousness. Please note that your memorandum should not address questions of invalidity on other potential grounds or questions of unenforceability. In preparing your memorandum, you might want to note that Bob has already found the following: (1) page 731 of the American Heritage Dictionary of the English Language (3d ed. 1992) defines “frustum” as “[t]he part of a solid, such as a cone or pyramid, between two parallel planes cutting the solid, especially the section between the base and a plane parallel to the base”; and (2) page 1370 of the same dictionary defines “piece” as “[a] thing considered as a unit or an element of a larger thing, quantity, or class; a portion.”

Bob has added that, for purposes of your memorandum, you should assume (1) that the IMC cowbell’s sides form a “frustum-like shape” in accordance with the meaning of this phrase in claim 1 of Jane’s patent and (2) that cowbells used by Jane before she used the Jangler bell do not anticipate claim 1 because of the presence of two side seams in each of these previously used bells. Also, you should assume that claim 1 does not contain either an implicit “bell” requirement or an implicit “no additional holes” requirement that would prevent anticipation by the IMC application simply because it discloses a flute having holes in its sides, rather than a bell that has an opening only at its bottom.

Please draft a memorandum as requested by Bob, assuming for purposes of the memorandum that all information received from IMC is correct. Please provide a word count at the end of your memorandum.
**Question 2:** Respond to **ONLY ONE** of the following policy prompts in **1000 words or less**.

**2A:** The patent system is an antiquated legal regime for promoting progress that is groaning under the weight of humanity’s scientific and technological successes. The spectacle of judges and juries bumbling about as they make immensely important rulings involving science, technology, and economic issues that they cannot be expected to fully understand and sometimes, as with Justice Scalia in *Association for Molecular Pathology v. Myriad Genetics*, openly proclaim they do not understand is by itself almost too much to bear. When one adds the uncertainty, high costs, and potentially long duration of U.S. patent litigation, one has a system that seems remarkably ill-fitted to rewarding meritorious inventors while generally sparing innovators vexatious assertions of patent infringement that do society little good. Enough with waiting for that day when we will have the sort of rigorous empirical evidence of patent system failure that would satisfy Fritz Machlup. Common sense tells us that the current system is not well designed to promote progress and should be substantially scrapped.

**2B:** In the 19th century, the courts took a wrong turn in adopting an essentially minimalist view of the inventive utility required for valid and enforceable patent rights. As the Federal Circuit’s In re *Fisher* decision partly and at least indirectly suggested, patent law can and should recognize a far more robust utility requirement, one that actively looks to ensure that a patented invention is, in Thomas Jefferson’s words, “worth to the public the embarrassment” of the rights to exclude that patents putatively provide. In scattered, piecemeal ways, patent law already incorporates concerns about truly added value—for example, in secondary considerations for nonobviousness, in considering irreparable injury and the balance of hardships in relation to requests for injunctive relief, in factors relevant to assessment of patent damages or “ongoing royalties,” and in imposing maintenance fees that help discourage the retention of trivial patents. We can and should make such concern with value more robust, coherent, and systematic through a utility requirement that demands that a patent owner make at least a plausible showing that the invention in question adds very substantially to the public good.
**Question 3: 500 words or less**

Jules Jameson is a fashion designer and client of yours who brings in a new product she wants your help in obtaining a utility patent for (*not* a design patent, though she may later pursue that as well). Jules’ designer men’s jacket (in red and other colors) will cost $168.00 (Figure 1) and has 168 pockets as a nod to her birthday, January 1968. Jules does not want someone to swoop in and sell a knock-off of her jacket with 167 or 169 pockets.

Your paralegal has identified the following wearable garments that may qualify as prior art:
Your paralegal also identified other non-wearable items that may qualify as prior art:

When you saw Jules’ invention, you immediately thought of the Marvel character Cable:

Starting with the words “I claim,” draft claims that comprehensively cover Jules’ invention. You recall Judge Rich’s comment, “The name of the game is the claim,” and want to prepare strong claims that will not be rejected by the USPTO and withstand litigation from inventors of prior art. You may extrapolate to claim aspects of the invention that are not visible in the image (e.g., jacket interior), but do not do any additional prior art research.