

## **GNG4170 – Engineering and the Law**

Final Examination – August 9, 2008 – 3 hrs, closed book

**Q1 Answer one of (a) or (b) (5 marks total)** (approx. 9 minutes)

- (a) who is a provisional licence intended for, and what are the limits/restrictions of this licence?
- (b) briefly explain the differences between “discipline” and “enforcement”

**Q2 Briefly define/explain five of the following terms (5 marks each / 25 total)** (approx. 9 minutes each, 45 minutes total)

- (a) ADR
- (b) Hunter v. Syncrude decision
- (c) vicarious liability
- (d) contract “A”
- (e) patent
- (f) elements of an enforceable contract (list only)
- (g) frustration of a contract

**Q3 Answer “True” or “False” (only) to each of the following 5 statements (1 mark each / 5 total)** (approx. 9 minutes total)

- (a) You require a certificate of authorization working full-time doing engineering work for a car-company.
- (b) As a result of fraudulent misrepresentation, your remedies are rescission (if possible), compensation, and damages for the tort of deceit.
- (c) In the event of an “unobvious” mistake by a tenderer, the owner will get to keep the tender deposit.
- (d) One person (alone) operating a business can either run a sole proprietorship or a corporation.
- (e) Strict liability is an exception to fault being required for tort liability.

**Q4 answer one of (a) or (b) (10 marks total)** (approx. 18 minutes)

- (a) Your engineering firm has asked you to draft a restrictive covenant for the employment contract of a new employee who will be practicing mechanical engineering. This new employee has a great deal of experience, a great reputation in Ottawa, and clients are always very impressed with her work. Provide a draft clause of the contract, explain the legal issues involved with restrictive covenants, and explain why you made the choices you did in the clause you drafted.
- (b) Explain the term "limitation period" and the details of the (relatively) new legislation in Ontario that addresses this concept.

**Q5 (20 marks)** (approx. 36 minutes)

Live Rail specializes in installing railway commuter systems, and has been awarded a contract by a municipal government to design and build a transit facility in British Columbia. As part of the design, Live Rail was required to design an overhead contact system in a tunnel (for the electric-powered locomotive(s)). Live Rail subcontracted out the sub-design of the contact-system to Ever Works.

Ever Works designed the contact-system, however, in doing so it did not carry out any testing nor did it gather any data of its own relating to the conditions inside the tunnel. It did not even request copies of underlying reports which, had they been examined, would have indicated that there was a large volume of water percolating through the tunnel rock and that the tunnel rock contained large amounts of sulphur compounds. The project documentation that was turned over by Live Rail to Ever Works did not include the underlying reports, but did identify the existence and availability of the underlying reports.

The construction of the rail system through the tunnel was completed in accordance with the Ever Works' design. However, within eight months of completion, the overhead contact system in the tunnel became severely corroded and damaged due to the water seepage in the tunnel.

As a result, the municipality had to spend substantial additional money to redesign and rewire the system.

What potential liabilities in tort law arise in this case? In your answer, explain what principles of tort law are relevant and how each applies to the case. Indicate a likely outcome.

**Q6 (20 marks)** (approx. 36 minutes)

PaperCo entered into an equipment supply contract with ManuCo. According to the agreement, ManuCo was to design, manufacture and deliver equipment to PaperCo, for a purchase price of \$7.5 million.

According to the contract, PaperCo would pay the price in installments. The agreement noted: "Each installment is due on the last day of the month, but there is a 10-day grace-period. If PaperCo fails to pay any installment within 10 days after the instalment becomes due, ManuCo will be entitled to terminate the contract."

ManuCo invoiced PaperCo for each monthly installment. Although PaperCo paid the first installment on time, it was more than 20 days late in paying the second, third, fourth, fifth and sixth installments.

ManuCo never once complained about the late payments, even when PaperCo apologized at several meetings. At those three separate meetings, ManuCo stated it was prepared to wait for the late payments, provided they were not more than 30 days late (i.e., a "30 day grace period").

By the middle of September (seven months into the payment contract), ManuCo realized that due to serious cost overruns resulting from its own design errors and lack of productivity, it would stand to lose a substantial amount of money on the contract by the time the installments were all paid. Although the installment for month seven had been invoiced, PaperCo had not paid it by the 15<sup>th</sup> of month eight. On that day, ManuCo terminated the contract.

Was ManuCo entitled to terminate the contract? Identify the contract law principles that apply in this case and explain the basis of the principles and how they apply in the current case.

**Q7 Answer one of (a) or (b) (15 marks) (approx. 27 minutes)**

(a) You are an engineer working for a firm on a project with a colleague, involving designs for a nuclear reactor. You suspect your colleague (also a P.Eng) has a problem with drugs/alcohol and believe this may be affecting the work he is doing on the reactor. Your colleague's portion of the work has been sent out for implementation/construction. Discuss the ethical considerations, and what you should do.

(a) Omega has worked for XYZ Manufacturing for five years. During the first four years, Omega was an Engineer-in-Training, getting the experience to obtain her licence. Theta (P.Eng) has been Omega's supervisor. The first year since Omega has been licenced has gone very well. Unfortunately, Omega is frustrated that more challenging work has not been coming (even though promised by Theta).

Rho, an engineer at 123 Widgets (one of XYZ's suppliers), tells Omega about a job opening at 123. Omega interviews for the position, is offered a job, and accepts. Omega gives one-month's notice to XYZ.

Theta asks Omega to reconsider this decision, but Omega says "no". Omega also refuses to disclose the name of his new employer, even though during the final month of work at XYZ, he will be continuing to evaluate bids and award contracts to various suppliers, including 123 Widgets.

Discuss the ethical considerations in these circumstances. As part of your answer, discuss: Omega's decision to leave XYZ and to refuse to tell (in these circumstances) the identity of his (soon-to-be) new employer (123 Widgets).

**[end of exam]**

*best wishes for the remainder of the summer, and the future*