

Part I: Answer any three questions. Each is worth 20 points.

1. Suppose that the courts are deciding whether to impose a rule of negligence or strict liability upon a new kind of accident. What considerations tend to make litigation costs higher under a negligence rule? What considerations tend to make litigation costs higher under the rule of strict liability?
2. An airplane crashes as the result of a *nonnegligent* defect in an instrument supplied by A. The airplane was manufactured by B from various components, including the instrument supplied by A. The airplane is operated by airline C. What economic difference does it make, if any, whether A is liable for the damages resulting from the crash, or B, or C?
3. Suppose there is a class of automobile accidents in which the injurers are all very wealthy men. The opportunity costs of their time are so great that the expected accident costs are lower than the costs to them of preventing the accidents by driving more slowly (slower driving being the only method by which accidents could be prevented). In these circumstances, which rule of liability would be more efficient: strict liability (with no defense of contributory negligence), or no liability at all? Explain.
4. True, False, or Uncertain? Explain. Answer any two of the following.
 - a) The availability of liability insurance to drivers reduces their incentive to drive carefully, with the result that there are more accidents. Insurance is therefore detrimental to welfare.
 - b) If the courts enforce a negligence standard in determining liability for auto accidents, then people will take too many car trips.
 - c) Under the rule of strict liability, victims tend to take too little care in bilateral accidents while injurers take the optimal amount of care.

Part II: Answer both questions.

5. A recent study has demonstrated conclusively that the installation of a certain device on each automobile reduces the probability of auto/pedestrian accidents from 25% to 20%. The average cost to the pedestrian of each accident is \$20,000. The cost of the device is \$1,200.

- a) Use the Hand Rule to determine whether driving without the device would constitute negligence. Be sure to define your terms and show your work. [4 pts]
- b) Assume the court declares that drivers who fail to install the device are negligent. Assume the tort rule is negligence. If the negligent injurer is liable for the increase in accidents from 20% to 25% caused by his or her negligence, will the driver who seeks to minimize his expected costs install the device? Explain. [4 pts]
- c) As in part (b), assume the court declares that drivers who fail to install the device are negligent, and assume the tort rule is negligence. Unlike in part (b), however, assume that the court cannot tell whether or not a particular accident would have been avoided by the device. Consequently, the court holds the negligent injurer liable for all the harm caused by accidents (not just the increase from 20% to 25%). Will the driver who seeks to minimize his expected costs install the device? Explain. [4 pts]

6. Terry can drive his car slow, medium, or fast. As he drives faster, Terry's benefit increases from 55 to 85 to 120. Pat the pedestrian can walk, which yields a benefit of 0, or run, which yields a benefit of 5. Pat's risk of an accident increases as Terry and Pat move faster. The risk of accident can be expressed in terms of expected accident costs.

The following matrix summarizes the benefits and expected costs for Terry and Pat. To illustrate how to read a cell in the matrix, if Terry drives at medium speed and Pat runs, Terry's benefit equals 85, and Pat's benefit equals 5, and Pat's expected accident cost equals 55, thus yielding net benefits to Pat equal to -50 (= 5 - 55).

		Pat's Benefit minus her Expected Costs from an Accident	
		Walk	Run
Terry's Benefit	Slow	0 - 30 = -30 55	5 - 40 = -35 55
	Medium	0 - 40 = -40 85	5 - 55 = -50 85
	Fast	0 - 85 = -85 120	5 - 105 = -100 120

- a) What behaviors by Terry and Pat are socially efficient? [4 pts]
- b) Assume the tort rule is no liability. What behaviors do Terry and Pat choose? [4 pts]
- c) Assume the tort rule is negligence, and Terry is negligent unless he drives at the efficient speed. What behaviors do Terry and Pat choose? [4 pts]
- d) Assume the tort rule is strict liability with a defense of contributory negligence, and Pat is negligent unless her behavior is efficient. What behavior does Terry choose? What is his expected net payoff (payoff net of expected liability)? [6 pts]