**Name**

ENGR 1100 – Dr. Marwan Zabdawi

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**Challenger Explosion**

1. **Should the Morton-Thiokol engineers have blown the whistle and announced to the press that NASA management was endangering the lives of the crew members and risking the destruction of the space shuttle?**

1. **No launch is completely safe; space travel is inherently risky. The astronauts accepted the risk when they volunteered for the job. Should they have been informed that the risks were higher for this particular launch?**

1. **Of the three main moral theories – ethical egoism, utilitarianism, and rights analysis- which moral theory were the Morton-Thiokol and NASA management using when they made the decision to launch over the objections of the engineers? In retrospect, we can judge their action to be wrong. What moral theory or theories are we applying?**

1. **Is it unfair to place blame on NASA managers? After all, every launch has risks and someone has to make the decision to launch.**

1. **Should the engineers be faulted for developing an inferior design? Perhaps they should have incorporated heating tape into the joints if low temperatures were known to be a problem.**

1. **Should an escape system be installed on space shuttles even though it imposes a severe weight penalty and reduces the shuttle payload capacity?**

**Missouri City Television Antenna Collapse**

1. **Did the engineering company have a faulty design? Should they have anticipated the problem and designed accordingly?**

1. **Were the riggers operating outside their area of expertise? Should they have hired an engineering consultant to calculate the necessary bolt size?**

1. **Should the engineering company have been more helpful and less legalistic?**

1. **Where did the responsibility of the engineers end and the riggers begin?**

1. **Of the three main moral theories – ethical egoism, utilitarianism, and rights analysis – Which theory was the boss of the engineering company using?**

1. **Elaborate on the legal and moral conflicts of the engineer who was contacted by the rigging company.**

**Kansas City Hyatt Regency Walkway Collapse**

1. **Should the engineers be allowed to practice engineering in other states?**

1. **Should the engineers be held responsible for a simple error such as this? After all, they had to make thousands of decisions and everyone is entitled to make a mistake.**

1. **Engineering is a discipline requiring attention to detail. Is it ethical for professors to give students partial credit for wrong answers that are sort of right?**

1. **In court testimony, G.C.E. claims it was never called by Havens about the proposed design change, yet their seal was affixed to the revised drawings. Does it appear G.C.E. was telling the truth?**

1. **Should the fabricator be held responsible for overloading the support nut?**

1. **What can be done to prevent such catastrophes in the future? Should the government review all drawings? If procedural changes are implemented, what is their impact on efficiency and cost?**

1. **Should the engineers have lost their licenses?**

1. **Upon further investigation, it was found that the atrium roof had collapsed during construction. G.C.E. claims that the owner (Crown Center Redevelopment Corporation) was unwilling to pay for onsite inspection, even though G.C.E. requested it three times. How much responsibility does the owner have to ensure that the engineers are funded well enough to properly perform their job?**
2. **Even the original walkway design was questionable. Were the engineers living up to their obligations to be technically competent?**

1. **Because Gillum had delegated responsibility to Duncan to do the design, should Gillum be held liable for Duncan’s mistakes?**

1. **How can competent engineers protect themselves from the impact of incompetent engineers?**

1. **Should stronger certification laws be enacted to eliminate incompetent engineers?**