Final Assignment – Due date – 6/29/23

**Instructions-**

During the semester we have examined numerous engineering events and disasters including the Therac-25, Space Shuttle Challenger, Hyatt Regency Collapse, Citicorp Building, Boeing 737 Max, Deepwater Horizon, and Nuclear Disasters. Some sections (in the group and individual presentations) have also looked at Apollo 1 and other Space Missions, the Flint Water Crisis, the Manhattan Project, the Boston Molasses Disaster and Titanic. Please select 1 of these (or a different engineering event/disaster of your choice) and respond to the questions below.

You may use the articles examined in class and/or conduct additional research on the topic. As part of your response, you may use some of your work (your responses) from the Weekly Reading Responses and/or from your Presentation.

Assignments should be a **minimum** of 3 pages in length, double-spaced. Each question should be answered in at least 3-4 sentences/1 paragraph. Grading will be based on content (you must respond to all questions) as well as overall organization and clarity, and spelling/grammar. You can organize your responses by question or in an essay format. Questions 1 and 9 are worth 5 points each; questions 2-8 are worth 3 points each (choose any 5 of the 7 questions); spelling, grammar, organization, etc- 5 points. Total= 30 points.

**Questions- You must answer questions #1 and #9. Select any 5 from questions 2-8.**

1. **Provide a brief summary of the event/disaster. Describe at least 2 technical and 2 non-technical (e.g., human factors, social, economic, cultural, political, environmental) issues that contributed to the event/disaster.**

**Select any 5 of the following 7 questions to answer-**

1. In your opinion, who/what is primarily responsible for the event/disaster? Why?
2. What are the ethical issues or decisions involved in the event/disaster?
3. What was the impact on society (on the culture, environment, economy, perceptions, etc)?
4. What changes were made after the event/disaster (e.g., laws/regulations)?
5. List one positive and one negative outcome from this event/disaster.
6. What are engineers ethical and professional responsibilities in the design/creation of the systems/products like the ones that contributed to the event/disaster?
7. What can/should have been done to prevent something like this from happening?
8. **Select a second disaster. Compare and contrast the two events/disasters in terms of primary causes (technical and non-technical differences and similarities).**