ASSIGNMENT 0

Instructions: This is a diagnostic pre-assignment meant to give you an idea of the nature of this course and the prerequisite knowledge required.
There is NO grading. Attempt all questions based on your current understanding.

Q1. Which of the following best defines a hazard?
A. The probability of an accident
B. A source or situation with potential to cause harm
C. The severity of injury after an accident
D. A safety rule violation

Q2. Risk is most appropriately defined as:
A. Number of accidents in a year
B. Unsafe act by a worker
C. Combination of likelihood and consequence of an event
D. Cost incurred due to accidents

Q3. If the probability of a minor accident on a machine in a day is 0.02, what is the probability that no accident occurs on that day?
A. 0.02
B. 0.98
C. 1.02
D. Cannot be determined

Q4. Which of the following is an example of a leading safety indicator?
A. Lost Time Injury Frequency Rate (LTIFR)
B. Number of fatalities
C. Near-miss reports
D. Unsafe acts

Q5. Which of the following is NOT a descriptive analytics technique?
A. Mean accident rate
B. Bar chart of injury types
C. Prediction of future accidents using regression
D. Frequency distribution of hazards

Q6. A plant recorded 10 accidents in 1,000,000 work hours. What is the accident rate per 100,000 work hours?
A. 0.1
B. 1
C. 10
D. 100

Q7. Which of the following issues most directly affects safety data quality?
A. High safety budget
B. Under-reporting of near misses
C. Use of PPE
D. Safety training duration

Q8. Which measure best represents the central tendency of accident severity scores?
A. Variance
B. Standard deviation
C. Mean
D. Range

Q9. Which of the following best reflects predictive safety analytics?
A. Counting last year’s accidents
B. Ranking hazards by expert opinion
C. Estimating future accident probability using historical data
D. Writing safety rules

Q10. Which of the following skills will be most helpful for successful completion of this course?
A. Advanced thermodynamics
B. Basic statistics and probability
C. Structural design codes
D. Chemical reaction kinetics

Instructor Key
Q1 – B
Q2 – C
Q3 – B
Q4 – C and D
Q5 – C
Q6 – B
Q7 – B
Q8 – C
Q9 – C
Q10 – B