Unit 3 Assessment

1. What is utility theory?
2. What is the difference between positive theory and normative theory?
3. Define utility function and how it is used in utility theory.
4. Explain the principle of expected utility maximization.
5. Consider an investor with utility function $U(w) = w^{0.5}$, where w is his wealth. Assume that the investor's current wealth is $5. Consider an investment based on a fair coin flip. If it is heads, the investor receives $4. If it is tails, then the investor loses $4. Calculate the utility for different investment options and determine whether he should play the game.
6. What are assumptions of the utility theory?
7. What are the expected value and the expected utility?
8. What is diminishing marginal utility?
9. What are availability bias, experience bias, and anchoring bias?
10. Explain sunk cost.
11. What is the main difference between E(U) theory and the value function approach?
12. What is adverse selection?
13. What is risk premium?
14. An investor has two investment options. With option A, the investor will able to gain $500 without any risk. With option B, the investor will have 50% chance of gaining $1200 and 50% of gaining $0. Calculate the risk premium of B over A.