

Introduction to Game Theory

Game Theory · Answer Key · 10 Questions

1. In game theory, what is a 'player'?

- A) A person who makes a choice.**
- B) A set of rules for a game.
- C) The final outcome of a game.
- D) A game that is difficult to win.

2. What is a 'strategy' in game theory?

- A) The amount of points a player gets.
- B) A plan of action a player will take.**
- C) The number of rounds in a game.
- D) A tool used to cheat in a game.

3. Which of these is an example of a 'zero-sum game'?

- A) A game where both players win.
- B) A game where one player's gain is another player's loss.**
- C) A game where everyone ties.
- D) A game where players cooperate to win.

4. What is the 'payoff' in game theory?

- A) The amount of time a game takes.
- B) The reward or consequence a player receives.**
- C) The number of players involved.
- D) The strategy that a player chooses.

5. The 'Prisoner's Dilemma' is a famous example in game theory that illustrates the conflict between individual self-interest and collective benefit. Which of these is a common real-world scenario that can be modeled by the Prisoner's Dilemma?

- A) Two friends sharing a toy.
- B) Two companies deciding whether to advertise.**
- C) A group of students working on a project.
- D) A family deciding where to go on vacation.

6. In game theory, what is a 'strategy profile'?

- A) A single player's plan.
- B) A set of strategies, one for each player.**
- C) The overall score of the game.
- D) A draw in the game.

7. What does it mean for a game to be 'simultaneous'?

- A) Players take turns making moves.
- B) Players make their decisions at the same time.**
- C) The game ends quickly.
- D) Players have to agree on a strategy.

8. In the context of game theory, what is an 'outcome'?

- A) A player's decision.
- B) The set of payoffs for all players.**
- C) The strategy chosen by one player.
- D) The rules of the game.

9. A game where players have perfect information means that:

- A) Players don't know the rules.
- B) All players know all previous moves.**
- C) Players can cheat easily.
- D) The game is very short.

10. Which of the following is a key element in defining a game in game theory?

- A) The color of the game board.
- B) The players, their strategies, and their payoffs.**
- C) The number of spectators.
- D) The time of day the game is played.