History of Game Theory

Game Theory · Practice Test · 15 Questions

1. Which mathematician published 'Theory of Games and Economic Behavior' in 1944, effectively launching game theory as a distinct field?

A) John von Neumann and Oskar Morgenstern
B) John Nash and Albert W. Tucker
C) Kenneth Arrow and Gerard Debreu
D) Herbert Simon and James March

2. In 1950, who proposed the famous 'Prisoner's Dilemma' thought experiment while working at the RAND Corporation?

A) Merrill Flood and Melvin Dresher
B) John Nash
C) Thomas Schelling
D) Robert Aumann

3. John Nash was awarded the Nobel Memorial Prize in Economic Sciences in 1994, primarily for his work on which concept?

A) The Nash Equilibrium
B) Bargaining Theory
C) Cooperative Games
D) Zero-sum Games

4. During the Cold War, which organization heavily funded game theory research to model nuclear deterrence and strategic military decision-making?

A) The RAND Corporation
B) The International Monetary Fund
C) The United Nations
D) The World Bank

5. Which 1838 work by Antoine Augustin Cournot is considered an early precursor to game theory, focusing on competition between firms?

A) Researches into the Mathematical Principles of the Theory of Wealth
B) The Wealth of Nations
C) Principles of Economics
D) Capital

6. What concept, introduced by Lloyd Shapley in 1953, provides a solution for distributing the total surplus generated by the cooperation of several players?

A) The Shapley Value
B) The Core
C) The Nucleolus
D) The Bargaining Set

7. In 1913, which mathematician published a paper on the game of poker that contained the first formalization of a minimax theorem?

A) Ernst Zermelo
B) Émile Borel
C) John von Neumann
D) James Waldegrave

8. Which game theory concept describes a situation where no player can benefit by changing their strategy while the other players keep theirs unchanged?

A) Nash Equilibrium
B) Pareto Efficiency
C) Dominant Strategy
D) Zero-sum outcome

9. In 1928, John von Neumann proved the Minimax Theorem, which fundamentally established the existence of an optimal strategy for which type of games?

A) Zero-sum, two-person games
B) Non-cooperative games
C) Infinite games
D) Imperfect information games

10. Who is credited with introducing the concept of 'Evolutionary Stable Strategy' (ESS) in 1973?

A) John Maynard Smith
B) George Price
C) Robert Trivers
D) Richard Dawkins

11. The 'Ultimatum Game' was first introduced in 1982 by a team of researchers led by which economist?

A) Werner Güth
B) Daniel Kahneman
C) Amos Tversky
D) Richard Thaler

12. Before game theory was formalized, who proved in 1913 that games of perfect information (like chess) have a deterministic outcome?

A) Ernst Zermelo
B) David Hilbert
C) Henri Poincaré
D) Bertrand Russell

13. In his 1960 book 'The Strategy of Conflict', which author applied game theory to international relations and nuclear diplomacy?

A) Thomas Schelling
B) Henry Kissinger
C) Kenneth Waltz
D) Hans Morgenthau

14. Which type of game involves players who must make decisions simultaneously without knowing the other player's move?

A) Normal-form game
B) Extensive-form game
C) Cooperative game
D) Stochastic game

15. Robert Aumann shared the 2005 Nobel Memorial Prize in Economic Sciences for his work on which aspect of game theory?

A) Repeated games
B) Mechanism design
C) Auction theory
D) Social choice theory