[Glossary]

Game Theory

Subject:	Business Economics
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Unit No. & Title:	Unit – 4 Theory of Game, Decision Theory and Decision Analysis
Lecture No. & Title:	Lecture – 1 (One) Game Theory

Glossary

Determinable game: When maximin value = minimax value, the corresponding pure strategies are called optimal strategies and game is said to have a saddle point and game is strictly determinable.

Dominance rule: The rules of dominance are used to reduce the size of the payoff matrix. These rules help in deleting certain rows and/or columns of the payoff matrix which is inferior to atleast to one of the remaining rows and/or columns in terms of payoffs to both the players.

Fair game: If the value of the game is zero than the game is fair.

Mixed strategy: When both the players are guessing as to which course of action is to be selected on a particular circumstance with some fixed probability, it is a mixed strategic game. The objective of the players is to maximize expected gains or to minimize expected losses.

n - person game: If the numbers of players are more than two, the game is called n-person game.

Payoff matrix: The payoffs in terms of gains or losses, when players select their particular strategies, can be represented in the form of a matrix, called the payoff matrix.

Pure strategy: It is a decision rule which is always used by the player to select the particular course of action. Thus each player knows in advance of all strategies out of which he always selects only one particular strategy irrespective of the strategy others may choose. The objective of the players is to maximize gains and minimize losses.

Two - person zero sum game:A game with only two players, say player A and player B is called a two-person zero sum game,

if say player A's gain is equal to the loss of player B, so that total sum is zero.

Two-person game: If a game involves only two players, then it is called a two-person game.

Zero sum game: If in a game the gains of one player are exactly equal to the losses of another player, so that the sum of gains and losses equals zero, then the game is called a zero sum game.