Semester V
B.A. (Honours) Economics
DSE 4 (Group-I): GAME THEORY (6 Credits)
Full marks: 100 (Mid Term-20 + End Term-80)

Course Description

Game theory is an integral part of modern economic analysis. Game theory introduces the students to elementary game theory under complete information. This course introduces the basic concepts of game theory in a way that allows students to use them in solving simple problems. The course will deal with the solution concepts for normal form and extensive form games along with a variety of economic applications.

Units		Number of Lecture hours	Number of Tutorial hours	Marks
1	**Normal form games** The normal form; dominant and dominated strategies; dominance solvability; mixed strategies; Nash equilibrium; symmetric single population games; applications.	20	4	20
2	**Applications of Game: II** Solution of the games- pure and mixed strategies; Graphical solution of 2x2, 2xm and nx2 games; best response strategies; solution methods for matrix games.	20	4	20
3	**Applications of Game: II** Cournot Duopoly model, Bertrand model, The Commons Problem, Prisoner's Dilemma, Nash equilibrium, Natural Monopoly and Bankruptcy laws.	20	4	20
4	**Extensive form games with perfect information** The game tree; strategies; subgame perfection; backward induction in finite games; Commitment; bargaining and other applications.	15	3	20
Total		**75**	**15**	**80**

Reading List:

1. Martin J. Osborne, An Introduction to Game Theory, Oxford University Press, New Delhi, 2004.
2. Barron, Game Theory: An Introduction, Wiley, New Delhi, 2008.
3. H. R. Varian (2010): Intermediate Microeconomics: A Modern Approach, 8th Edition, W.W. Norton and Company/Affiliated East-West Press (India).
4. R. S. Pindyck, D. N. Rubinfeld and P. L. Meheta (2009): Microeconomics, 7th Edition, Pearson, New Delhi.
5. C. Snyder and W. Nicholson (2012): Microeconomic Theory: Basic Principles and Extensions, 11th Edition, Cengage Learning, Delhi, India.