TM244518S

Reg. No :.....

Name :.....

MASTER'S DEGREE (C.S.S) EXAMINATION, MARCH 2024

2022 ADMISSIONS REGULAR

SEMESTER IV - Economics

EC4E08TM20 - Game Theory and Its Economic Applications

Time : 3 Hours

Maximum Weight : 30

Part A

I. Answer any Eight questions. Each question carries 1 weight. (8x1=8)

1. What are the important specifications to be included in a normal form representation of the game?
2. What is a Nash equilibrium?
3. Analytically, what is the difference between a repeated game with an uncertain end and an infinitely repeated game?
4. The matching pennies game is an example of a non-zero-sum game because someone always ends up with a penny. Do you agree? Why not?
5. Give an idea on game tree. Illustrate it by means of a diagram.
6. Briefly explain the term risk premium.
7. What do you mean by player's belief profile.
8. Define an information set. Illustrate using diagram.
9. Explain the uses of game theory.
10. Briefly explain winners curse in auction.

Part B

II. Answer any Six questions. Each question carries 2 weight (6x2=12)

11. What is a Nash equilibrium? 'To have a Nash equilibrium is it necessary for both players to have a strictly dominant strategy?'-Explain.
12. Differentiate between cooperative and non-cooperative games.
13. State and explain the minimax theorem with suitable example.
14. Explain the difference between a credible threat and a trigger strategy. How are they similar?
15. How is backward induction method used to determine a subgame perfect equilibrium?
16. Describe a subgame perfect equilibrium.
17. Elucidate dynamic games with incomplete information.
18. Briefly explain Median voter theorem.

Part C

III. Answer any Two questions. Each question carries 5 weight (2x5=10)

19. 'A rational player should adopt a dominant strategy whenever possible. Alternatively, a rational player should not adopt a dominated strategy'-Explain
20. Explain how fold-back method reduces finitely repeated, pure-strategy games with complete information with a certain end, to a series of noncooperative, one-time, static games.
21. Discuss the concepts of Information sets and Bayesian updating.
22. Explain the methods of alternative voting schemes.