

M.A. Examination, 2019

Semester-II

Economics

Course -V

(Microeconomics-II)

(For Back Candidates)

Time: 3 Hours

Full marks: 40

Questions are of value as indicated in the margin

Answer *any four* questions.

1. (a) Discuss the Axioms underlying the von-Neumann Morgenstern Expected Utility Theorem?
(b) How is the Axiom of Independence violated in case of the Allais Paradox? 5+5
2. (a) Derive and explain the Arrow Pratt measure of risk aversion.
(b) If a competitive insurance company charges 'actuarially fair premium, show that the consumer will purchase full insurance. 3+7
3. Consider a market for a good with two groups of consumers (50 in each group) who have individual demand functions
$$D^1(p) = 20 - p$$
$$D^2(p) = 10 - p$$
 - (a) If a simple monopolist who has a unit cost of production $c = 2$ is permitted to charge a single price for the good, what price would he charge? What would be the profits?
 - (b) If the monopolist is permitted to charge an entry fee as well as a per unit price (i.e a two part tariff) what is be the entry fee and price? Is the profit higher in this case? 3+7
4. A Monopolist produces a durable good that lasts for only two periods. The cost of production is zero and the common discount factor is δ where $\delta=1/(1+0.1)$. The demand for the good in each period is $D(p) = 10 - p$ show that
 - (a) If the monopolist rents out the good in each period then the optimal (profit maximizing) rental rate charged by the monopolist would be the same in both periods.
 - (b) Show that if the monopolist sells the good in each period and a resale market exists in which goods sold in the first period can change hands, then the first period price always exceeds the second period price. 3+7

P.T.O.

(2)

5. (a) With the use of a numerical example explain the method of iterated removal of dominated strategies.
(b) Use this method to show that the optimal bid for each bidder in a Second Price Sealed Bid Auction (with private values) is to quote the true value of the bidder. 3+7
 6. (a) Define a Sub-Game perfect Equilibrium.
(b) In the context of a Stackelberg duopoly with quantity competition explain the concept of first-mover advantage. 3+7
 7. (a) Show that it is usually difficult to sustain collusion in duopoly context when the firms operate and interact for a finite number of periods.
(b) Can collusion be sustained if the firms operate / interact for an infinite number of periods? If so, under what conditions? 6+4
 8. Consider a job market with competitive employers who plan to recruit candidates of whom a fraction have low productivity and a fraction $(1-p)$ who have high productivity. Assume that the true productivity is known only to the candidate. Show that generally, the employer will not offer a wage high enough to be acceptable to the high productivity candidate. Further, if the employee chooses to signal her true quality to the employer, she must choose a signal that has low cost for the high productivity and high cost for the low quality candidate. 3+7
-