

**M.A. Examination, 2017**  
**Semester-II**  
**Economics**  
**Course-V**  
**(Microeconomics-II)**

**Time: 3 Hours**

**Full Marks: 40**

*Questions are of value as indicated in the margin.*

Answer **any four** questions

1. (a) State and discuss the axioms of von-Neumann Morgenstern expected utility theory. Specifically the Independence Axiom.  
(b) Provide an example to illustrate how the Independence Axiom is violated in case of the Allais Paradox. 3+7
2. (a) Show how risk-aversion of the consumer is represented by the concavity of the Bernoulli utility function.  
(b) Show that if the insurance market is perfectly competitive the insurance company charges “actuarially fair premium”.  
(c) In case (b) above show that the consumer buys “full insurance”. 2+4+4
3. (a) Define the Nash equilibrium in a Simultaneous Move Game.  
(b) Show that in case of a Cournot Oligopoly, if the unit cost of all firms are constant and identical and the demand curve is linear ( $p = a - bQ$ ,  $Q = \sum q_i$ ) an increase in the number of firms leads to  
(i) fall in output and profits of each firm.  
(ii) an increase in aggregate profit. 2+5+3
4. (a) Explain the concept of iterated elimination of dominated strategies.  
(b) Show that in a second price sealed bid auction, it is optimal for any bidder his true value of the object. 2+8
5. (a) What do you mean by Price-Discrimination? Why is “no resale” an essential condition for price-discrimination?  
(b) Distinguish between First and Third degree price discrimination. Can you explain in which case the market price will be higher? 4+6
6. (a) Explain how an object is divided by two parties under Non-cooperative Repeated Bargaining.

P.T.O.

(2)

(b) Show that if bargaining can continue for infinite periods, then the division of the object will depend on

(i) who makes the first offer

(ii) the rate of discount ( $\sigma$ )

4+6

7. (a) Describe the model of Risk – sharing between a Principal and an Agent. Show that if the principal is Risk-Neutral and the Agent is Risk-Averse, the optimal contract is a fixed wage (for the Agent) contract.

(b) Does the optimal contract remain the same in case of Moral Hazard? Explain. 7+3

8. Consider a monopolist operating in a market where customers may have “high” or “low” demand for the good she is selling – between whom the monopolist cannot distinguish. Show that the optimal (quantity-payment) packages offered by the monopolist in this market satisfies the following properties:-

(a) the “low” demand consumers do not obtain any consumers’ surplus but the “high” demand consumers do.

(b) the “high” demand consumers buy the Pareto-optimal amount but not the “low” demand consumers.

5+5

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