M.A. Examination, 2014

Semester – I

Economics

Paper – I

(Micro Economics-I)

Time: 3 Hours **Full Marks: 40**

Questions are of value as indicated in the margin.

Answer ***any four*** questions.

1. (a) State the properties of the Preference relation.

   (b) Suppose that preferences are complete, reflexive, transitive, continuous & strongly monotone. Prove that there exists a continuous utility function $U : R_+^k \rightarrow R$ which represents those preferences. 7+3=10

2. (a) State & prove the properties of expenditure function.

   (b) Derive Roy's identity

   (c) Prove that Hicksian demand function h (p,u) satisfies compensated law of demand if $U(\cdot)$ is a continuous utility functions representating a locally non-satiated preference relation. 4+4+2=10

3. (a) What are the properties of Production sets?

   (b) Consider the cost minimization problem

   $$C\ (w, y) = \min_{x_1 x_2} w_1 x_1 + \min w_2 x_2$$

   Such that $A x_1^a x_2^b = y$

   What is the associated cost function? 5+5=10

4. (a) Define the profit function & prove that as output price increases profit increases at an increasing rate. 4+3+3=10

   (b) What do you mean by break-even point & shut down point?

   (c) Farmers produce corn from land & labour. The labour cost in dollars to produce y bushels of corn $C(y) = y^2$. There are 100 identical farms which all behave competitively.

   (i) What is the individual farmer's supply curve of corn?

   (ii) What is the market supply of corn?

   (iii) Suppose the demand curve of corn is D (p) = 200 – 50p. What is the equilibrium price & quantity sold?

5. (a) Define Pareto efficiency & examine the conditions for Pareto efficiency in case of quasi linear utility functions.

   (b) What do you mean by Deadweight loss? Show how the equilibrium price and/or quantity changes when taxes are imposed. 4+6=10

6. (a) How might commodity grouping influence the income effect?

   (b) Draw the income and substitution effects for a Giffen good. Prove this using the own-price version of the Slutsky equation. 4+3+3=10

7. (a) Find the competitive equilibrium allocation.

   (b) Explain why the competitive equilibrium is inefficient?

   (c) Suggest a means whereby a benevolent government could achieve an efficient allocation. 3+4+3=10

8. (a) Show that in a pure exchange economy there can be more than one equilibrium.

   (b) Examine uniqueness and stability conditions under competitive setting. 4+6=10
