

八十七學年度 經濟 系(所) 組碩士班研究生入學考試

科目 個體經濟學 科號 5101 共 3 頁第 1 頁 *請在試卷【答案卷】內作答

1. Indicate whether you consider each of the following statements to be **True** or **False**. In each case please give a brief explanation of your answer. **Your grade will depend heavily on your explanation.** (5 points each question)

- (1) A risk-averse individual will accept almost any small, favorable bet, but reject some large bets even if they are much favorable than the small bets.
- (2) Walras' Law says that, under competitive equilibrium prices, the sum of excess demand in all the markets must be identically zero.
- (3) If a consumer's preferences can be represented by the utility function $U(x, y) = x + f(y)$, then the income elasticity of demand for y equals zero while the income elasticity of demand for x equals one.
- (4) In a single transaction it cannot have both adverse selection and moral hazard problems.
- (5) If all consumers regard x and y as perfect substitutes, then the relative price between x and y is equal to one.
- (6) Public goods are the goods that have to be provided by the government.
- (7) In a two-commodity exchange economy, Pareto efficiency means that, when both markets are perfectly competitive, the price mechanism will equalize marginal rate of substitution among all consumers.
- (8) During the past ten years, the demand for personal computer (PC) has greatly increased, and, at the same time, the market price of PC has decreased significantly. The above information implies that the supply curve of PC is downward sloping.

八十七學年度 經濟 系(所) 組碩士班研究生入學考試

科目 個體經濟學 科號 5101 共 3 頁第 2 頁 *請在試卷【答案卷】內作答

(9) Figure 1 shows that a consumer chooses point G when the budget line is AB, and chooses point H when the budget line changed to CD. We can thus conclude that the consumer's preferences have changed as prices and her money income changed.

(10) In Figure 2, TT is an economy's production possibility frontier and WW is its community indifference curve. If all markets are perfectly competitive and the equilibrium point is Q, then there could be (a) negative externalities in the consumption of x, (b) y being produced by a monopolist, (c) positive externalities in the production of y, or (d) distortions in the factor market.

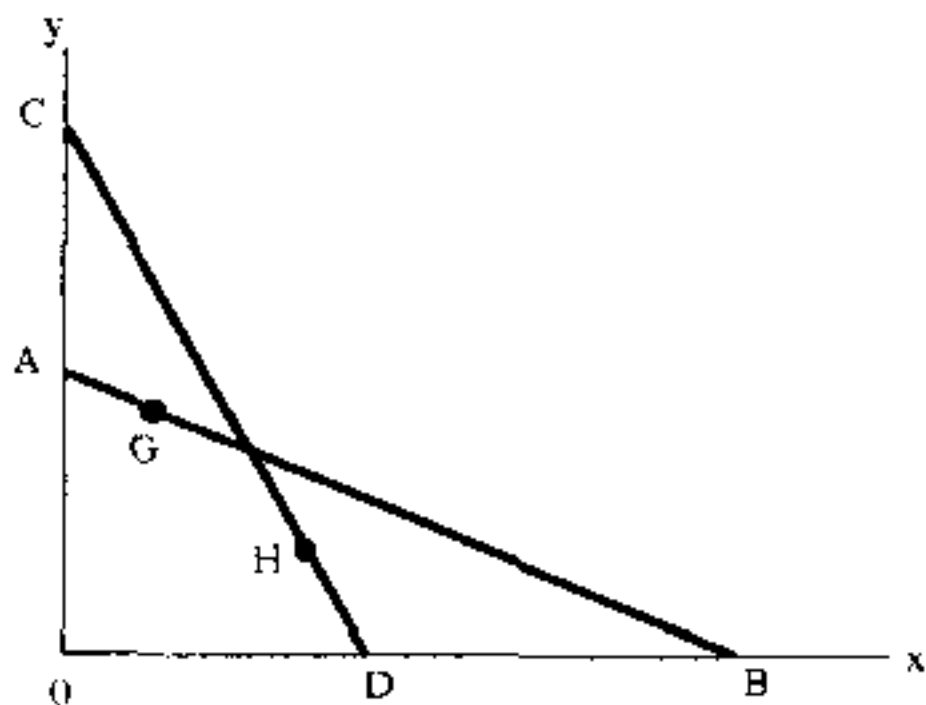
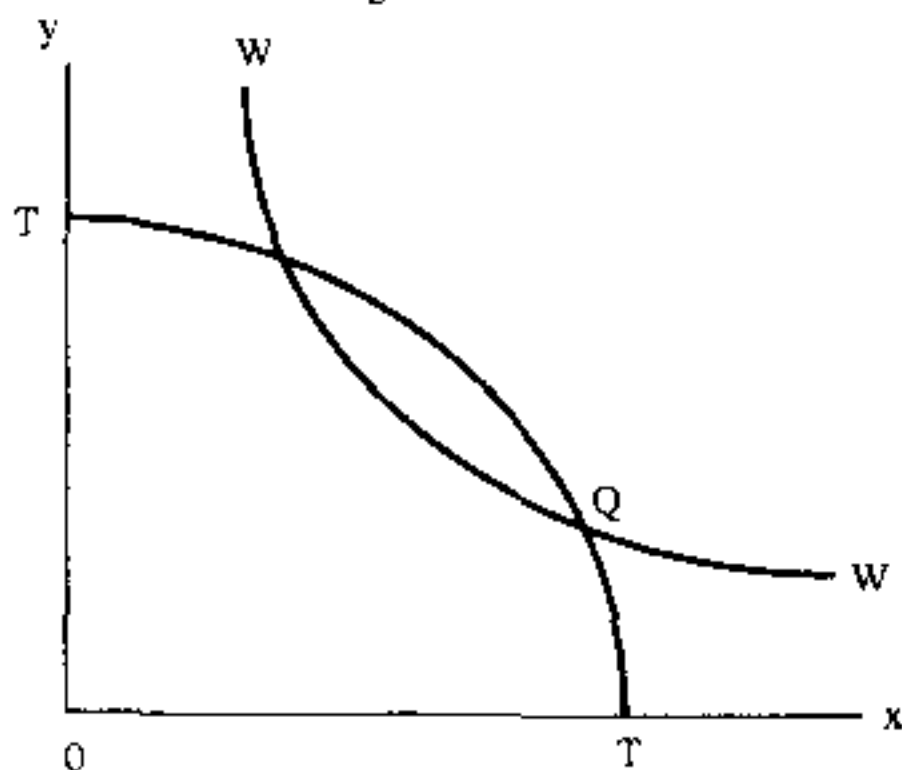


Figure 1



八十七學年度 經濟 系(所) 組 碩士班研究生入學考試

科目 個體經濟學 科號 5101 共 3 頁第 3 頁 *請在試卷【答案卷】內作答

- II. 假設廠商的生產函數為 $f(L, K) = (\min\{L, 3K\})^t$ ，其中 L 為勞動投入量， K 為資本投入量。 $\min\{L, 3K\}$ 等於 L 與 $3K$ 兩數值的最小值， t 為大於零的實數。
- 請說明此生產技術下勞動與資本間的關係並畫出等產量曲線。(5分)
 - 假定在短期下資本投入量固定於 100，勞動工資每單位 \$5，資本使用成本每單位 \$12。請導出並討論短期的成本曲線（含總、平均、邊際成本），並說明勞動的生產力與成本間的關係。(10分)
 - 在長期下，假定勞動工資每單位 \$5，資本使用成本每單位 \$12。請求出生產擴張線 (Expansion path)。請導出並討論長期成本曲線（含總、平均、邊際成本），並說明規模報酬與成本間的關係。(10分)
- III. 假設市場的需求曲線為 $P=100-5Q$ ，其中 P 為商品價格， Q 為商品數量。如果生產此一商品的產業為平均成本固定產業，每一單位生產成本為 \$10。
- 如果此市場為完全競爭，請計算均衡的價格與市場交易量。並計算均衡時消費者與生產者剩餘。(5分)
 - 如果此市場為獨佔，請計算均衡的價格與市場交易量。並計算均衡時消費者與生產者剩餘。如果獨佔廠商能做第一級的完全差別取價，請計算均衡的市場交易量與最後一單位的價格。並計算均衡時消費者與生產者剩餘。(10分)
 - 如果此市場為兩家同質廠商的雙佔，請計算寇諾納許均衡 (Cournot-Nash Equilibrium) 以及柏傳納許均衡 (Bertrand-Nash Equilibrium) 的價格與市場交易量。並計算兩種均衡下消費者與生產者剩餘。(10分)