

- 請依序答題。
- 請在答案卷上依題號順序標明「答案」即可，不須列出計算過程。
- 第5題開始，每題5分。

1. 仙島有兩家汽油供應商：台速（廠商1）與棕游（廠商2）。其邊際成本分別為每公升1元與2元，市場需求曲線則為 $Q = 15 - P$ 。請問：

- (6分) 若兩家廠商以 Cournot 方式競爭，兩廠商均衡生產數量 q_1^* , q_2^* 以及均衡價格 P^* 分別為少？
- (2分) 此時市場的無謂損失為何？
- (4分) 若兩家廠商採 Stackelberg 競爭，效率較佳者為 leader，則 q_1^* , q_2^* 分別為何？
- (4分) 若兩家廠商合併，此時市場無謂損失為何？

2. 台大無線網路的速度 (SI ，單位為 Kb/sec) 與使用人數 (N) 間的關係為 $SI = 10 - N$ ，台大學生的效用為

$$U = SI + M,$$

M 為貨幣，單位為元，學校提供多一人上網的邊際成本為 0。請問：

- (4分) 若學校採無線網路免費，則使用人數為多少？
- (4分) 社會最適的上網人數數量為何？
- (4分) 學校應該對上網收取每人多少費用，才能達到此一社會最適狀態？

3. 科 P 與聯 P 兩人參選天龍區區長，兩人對對手的人品與政見，有「扒糞批評」與「君子之爭」兩種策略可供選擇。若兩人皆採「君子之爭」，則各得 50 萬票；若兩人皆採「扒糞批評」，則各得 30 萬票。若一人扒糞、一人君子，則扒糞者 60 萬票，君子 20 萬票。

- (4分) 若兩人同時出招，請畫出 Normal Form Game (要有 players, strategies, and pay off)。
- (4分) 延續上一小題，請求解 Nash Equilibrium。
- (4分) 若兩人現在面對的不是一期賽局，而是三期賽局，請問此時納許均衡為何？

4. (10分) 某甲所得 100，效用函數為

$$U(X, Y) = \min [(X + 2Y), (2X + Y)]$$

X, Y 兩物品價格原來皆為 1。現在 X 價格降至 0.25，其他條件皆不變。請問此一改變後， X 的所得與替代效果各是多少？答題時須作圖，並標明各個均衡點 X 的值。(Hint: 無異曲線在 $X = Y$ 之處產生拗折。)

見背面

5. 依主計處的估計, 1999 年的 921 地震時, 台灣的住宅倒塌受損之金額合計為新台幣 1,140 億元。這表示:
- (a) 1999 年台灣的國內生產毛額減少 1,140 億元;
 - (b) 1999 年台灣的固定資本形成減少 1,140 億元;
 - (c) 1999 年台灣的國家財富減少 1,140 億元;
 - (d) 1999 年台灣的民間消費減少 1,140 億元。
6. 2008 年金融海嘯發生後, 許多國家的央行採低利率政策, 導致某些國家的實質利率甚至變成負值。若某國的實質利率為負值, 這表示:
- (a) 貨幣成長率高於物價膨脹率;
 - (b) 物價膨脹率高於名目利率;
 - (c) 名目利率高於經濟成長率;
 - (d) 經濟成長率高於貨幣成長率。
7. 統計資料顯示, 世國各國的平均每人 GDP 水準之差距有逐漸縮小之趨勢。亦即, 低所得國家之成長率平均而言高於高所得國家。經濟學家認為, 此一現象的主要原因是:
- (a) 勞動邊際產量遞減;
 - (b) 資本邊際產量遞減;
 - (c) 邊際替代率遞減;
 - (d) 邊際效用遞減。
8. 台灣央行在外匯市場買入一筆美元, 價值新台幣 100 億元。接著, 央行發行定期存單新台幣 95 億元。請問以上兩項政策之影響為:
- (a) 新台幣對美元貶值;
 - (b) 台灣的準備貨幣增加 5 億元;
 - (c) 央行外匯存底會增加;
 - (d) 以上皆是。
9. 2011 年底, 台灣各級政府債務未償餘額為新台幣 5.486 兆元, 2012 年底增加為 5.766 兆元。這表示:
- (a) 2011 年台灣有財政赤字;
 - (b) 2012 年台灣有財政赤字;
 - (c) 2012 年政府儲蓄大於政府投資;
 - (d) 以上皆是。

接次頁

10. 以下關於經常帳餘額 (current-account balance) 之描述, 何者為正確?
- (a) 經常帳順差表示本國是貸出者;
 - (b) 全世界所有國家之經常帳餘額的總和等於 0;
 - (c) 若國民儲蓄大於國內投資, 經常帳餘額將大於 0;
 - (d) 以上皆是。

請由以下的報導 (adapted from WSJ) 回答底下的問題:

According to Taiwan's Ministry of Economic Affairs, about 52.9% of the island's export orders in October were for goods produced and shipped outside Taiwan. That's up from 47% five years ago.

Electronic gadgets such as Apple Inc.'s iPhones and iPads are produced in factories run by Taiwan's Foxconn Technology Group, but located in China. Quanta Computer Inc., the world's biggest contract PC maker — producing for both Hewlett-Packard Co. and Dell Inc. — also manufactures almost exclusively in China.

That means the recent launch of new devices by these brands is buoying Taiwan's export orders and PMIs, but not its exports.

Foxconn and Quanta Computer moved to China in the 1990s to take advantage of lower production costs and vast pool of cheap workers. If these companies need to relocate some manufacturing as China's labor costs rise, they're more likely to build factories in Southeast Asia rather than come back to Taiwan. Foxconn, for example, has said it's considering building a smartphone factory in Indonesia.

Taiwanese businesspeople complain that the government doesn't provide enough incentives to lure businesses, citing a reluctance to open the door wider for low-cost foreign workers or offer more affordable land.

The fact that Taiwan finds it difficult to strike trade deals with other nations — due to pressure from China, which claims sovereignty over the island — also makes it less commercially viable for companies to move back, economists say.

11. 鴻海公司 (英文名字為 Foxconn) 的總部在台灣。依文章所述, 若鴻海公司接到蘋果公司 1,000 萬美元的訂單, 台灣的出口並不會增加 1,000 萬美元, 原因是:
- (a) 從接到訂單到實際生產, 通常要超過一年以上;
 - (b) 富士康公司的工廠位於中國境內;
 - (c) 訂單金額減中間投入才等於出口;
 - (d) 訂單金額扣除折舊, 才等於出口。
12. 依文章所述, 若中國的勞力成本上升, 在中國設廠的台商不一定會回到台灣來設廠, 原因是:
- (a) 台商覺得政府並未開放更多的外勞;
 - (b) 台商覺得土地取得不易;
 - (c) 因為中國反對, 台灣很難與其他國家簽訂貿易協定;
 - (d) 以上皆是。

見背面

請由以下的報導 (adapted from *The Economist*) 回答底下的問題:

Workers in China and America alike face a shared threat: they have captured ever less of the gains from economic growth in recent decades. The "labour share" of national income has been falling across much of the world since the 1980s. OECD reckons that labour captured just 62% of all income in the 2000s, down from over 66% in the early 1990s.

A falling labour share implies that productivity gains no longer translate into broad rises in pay. Instead, an ever larger share of the benefits of growth accrues to owners of capital. Workers in America tend to blame cheap labour in poorer places for this trend. They are broadly right to do so. Yet trade cannot account for all labour's woes in America or elsewhere. Workers in many developing countries, from China to Mexico, have also struggled to seize the benefits of growth over the past two decades. The likeliest culprit is technology, which, the OECD estimates, accounts for roughly 80% of the drop in the labour share among its members.

Cheaper and more powerful equipment, in robotics and computing, has allowed firms to automate an ever larger array of tasks. New research by Loukas Karabarbounis and Brent Neiman of the University of Chicago illustrates the point. They reckon that the cost of investment goods, relative to consumption goods, has dropped 25% over the past 35 years. That made it attractive for firms to swap labour for software whenever possible, which has contributed to a decline in the labour share of five percentage points. In places and industries where the cost of investment goods fell by more, the drop in the labour share was correspondingly larger.

Such trends may tempt governments to adopt new protections for workers as a means to support the labour share. Yet regulation might instead lead to more unemployment, or to an even faster shift to automation.

13. 依據文章作者之分析, 許多國家的勞動配額 (labor-share) 出現下降趨勢, 請寫出作者所舉出的兩個原因。
14. 為避免勞動配額持續下降, 有些國家考慮採取管制政策, 例如, 調高最低工資率。但本文作者認為此種作法可能無助於提升勞動配額, 他的推論為何?

試題隨卷繳回