

系別：產業經濟學系

科目：總體經濟學

准帶項目請打「V」

X 簡單型計算機

本試題共 / 頁

Please answer the following questions with necessary graphs, equations and words

1. The spot price of crude oil has been rising from \$45 per barrel in February 2005 to \$62 per barrel in February 2006. This rising trend of oil price has been the major concern for future economic performance in all industrialized countries.
  - (a) (20 points) Please use the Real Business Cycle theory to analyze the general equilibrium effects of a permanent increase in the price of oil (i.e., a permanent adverse supply shock) on employment, the real wage, current output, the real interest rate, and the price level. (Assume that, besides reducing the current productivity of capital and labor, the permanent supply shock lowers both the expected future marginal product of capital and households' expected future income.)
  - (b) (10 points) According to the Solow model, how this permanent increase in oil price would affect output per worker in the long run (i.e., in the steady state)?
  
2. In May 2001, the United States Congress passed, and President Bush signed, the Economic Growth and Tax Relief Reconciliation Act of 2001 (2001 年經濟成長及賦稅減免法案), which featured both short-run and long-run tax cuts.
  - (a) (5 points) What is Ricardian equivalence theorem (李嘉圖等量定理)?
  - (b) (15 points) Assume that the Ricardian equivalence theorem does not hold, please use the Keynesian IS-LM model (open-economy version) to describe the short run effect of this tax cut on output, the real interest rate, and net export.
  - (c) (15 points) The United States has been the main trading partner of Taiwan. Please explain how this tax cut in the United States would affect Taiwan's output, real interest rate, and net export in the short run.
  
3. From year 2000 to 2005, the trade deficit of the United State with China has rising from 84 billion US dollars to 202 billion US dollars. This increasing trade deficit with China has been the main reason for the United State to urge China to reevaluate its currency.
  - (a) (10 points) Please explain why under the fixed exchange rate system, when Ren Min Bi (人民幣) is undervalued, China will accumulate large amount of reserve (外匯存底).
  - (b) (5 points) If China switches to flexible exchange rate system, what will happen to the nominal exchange rate between the United States and China? Please explain why.
  - (c) (10 points) What is J curve? Assume the price levels in both countries stay the same, according to the exchange rate change you predicted in (b), how this change would affect the net export of the United States?
  - (d) (10 points) The United States has a huge amount of trade deficit, but we do not observe a sharp value drop in the US dollar, please explain why.