

English Written Examination

1) What has happened, over the past half century since the end of World War II, is the scientific information has become a basic and necessary element in the making of almost any political decision. This is obvious in the case of the environment, but since economic development must be integrated with the conservation of the environment in which it takes place, scientific information is basic for economic planning and decision-making as well. Economic growth, furthermore, depends 85 or even 90 percent on technological innovation which is based on scientific research. Thus the linkages between science and economic development are fundamental. (Translate into Chinese, 20%)

2) Although many problems are global in nature, the solutions to these problems will generally require national as well as international action. Typically, remedial measures within one nation will need support from parallel actions within other nations. Frequently, collaborative international action will be required. The prospects for such cooperation are best for programs of collection and analysis of data. International cooperation on monitoring may also increase the likelihood of smooth relations should a global program ever demand strict international regulation or control of pollution-producing activities. (Translate into Chinese, 20%)

3) On March 1, 1872, a beautiful area in the United States called Yellowstone was established as a national park. It was the first national park in the world. Yellowstone is located mostly in the state of Wyoming. It was chosen because of its wildlife, such as bison and wolves. It also has beautiful forests and grasslands. However, it is most famous for Old Faithful, a geyser that always erupts at regular intervals every day. The day Yellowstone became a national park is important not only historically but also environmentally. (Translate into Chinese, 20%)

4) Write an English essay on the influence of global climate change to the marine environment and sustainable development. (40%)

99 年海洋環境與管理

1. 闡述河口的重要性及保育措施。(20%)
2. 國際沿海國家積極推行海洋策略(Ocean strategy)來執行其所訂定的海洋法，主要執行工具包括海洋環境品質(marine environmental quality)及海洋保護區的建立。而目前我國政府亦極力推行「海洋立國」、「藍色國土」維護海域資源與權益。申論分析我國海洋政策之發展及方針。(20%)
3. 二十一世紀以來，世界各國對於海洋極為重視，尤其是在 200 海浬專屬經濟區延伸之海域疆土、資源的開發，而在維護海洋環境與保育更加重視，試闡述分析生態系統基礎管理(Ecosystem based management)之可行性及成效，包括：海洋污染防治之重要性或漁業捕撈法規之訂定等。(20%)
4. 詳述海洋環境品質及整合性的海岸管理(Integrated coastal management)之重要性。(20%)
5. 聯合國永續發展委員會於 1995 年 4 月通過指標系統，以社會(Social)、環境(Environmental)、經濟(Economical)及制度(Institutional)做海洋發展。請闡述如何建立台灣永續海洋環境指標。(20%)

申論題：共5題，每題20分，總分100分。

1. 請以(1)減碳邊際效益之差異(2)科技研發附加效益(3)減碳成本效益，三個角度一起論述讓碳交易制度形成的理由。(20分)
2. 請以(1)使用者付費(2)有能力者付費，兩種原則，論述政府與個人在因應氣候變遷衝擊之減緩(mitigation)與調適(adaptation)作為上可能扮演的角色。(20分)
3. 試述最適污染水準與污染邊際利益、平均成本的關係？(20分)
4. 請以博弈理論(Game Theory)提出可能解決”共有地悲劇(the Tragedy of commons)”之推論。(20分)
5. 兩位鞋商到了非洲後發現當地人都沒有穿鞋子，其中一位鞋商認為此處無商機，馬上打包回家；另一位卻認為商機無限，馬上設立聯絡處。請以供需理論解釋兩位商人的行為。(20分)

漁業管理科考試題目

- 一、有效的漁業管理政策必須要依據確實的科學研究結果，而科學研究又需要足夠且好品質的資料。漁業生物科學家常蒐集的資料包括漁獲量、努力量及魚的體長。請問 (1) 漁獲量資料如何取得？ (2) 何謂努力量資料？ (3) 為什麼需要努力量資料？ (4) 體長資料有何用？ (20%)
- 二、現今漁業發展已從以往的「開發型」甚至「濫捕型」，轉向以保育、合理利用為重的「管理型」漁業，為達此目的，常採用一些漁業管理措施。請說明常見的有那些措施及其目的。(25%)
- 三、早期有名的漁業生物學家 Russell 曾以成長量 (G)、加入量 (R)、自然死亡量 (M) 及漁獲量 (Y) 等四個因子，來說明漁業資源的變動，成為漁業合理利用或管理的基礎理論。請簡要說明這四個因子的關係，並利用其關係說明剩餘生產量 (surplus production)、持續生產量 (sustainable yield)、最大持續生產量 (maximum sustainable yield, MSY) 的意義。(30%)
- 四、近來在台南海區曾發生在沿岸作業的流刺網漁業，與進入 6 海浬作業的雙船拖網漁業的糾紛，請從資源有效利用及生態保育的角度，說明對這糾紛事件的想法。(25%)

99 年度海洋事務研究所-海洋法考題

1. 解釋名詞：(20%)
 - A. The right of innocent passage (3%)
 - B. International court of justice (3%)
 - C. Fisheries jurisdiction right (3%)
 - D. The coastal state shall determine the allowable catch of the living resources in the Exclusive Economic Zone. (5%)
 - E. Over exploitation (3%)
 - F. The discretionary power (3%)
2. 闡述沿海國的基本權利與義務。(20%)
3. 從國際法論台灣漁業捕撈及法律制度。(20%)
4. 闡述海域劃界之領海法則。(20%)
5. 索馬利亞亞丁灣海盜劫持台灣漁船事件，及國際組織維安行動，試分析台灣對於其主權、國際地位及軍事戰略等立場，應如何提出因應對策。(20%)