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本試卷總共有 3 個題組，共 27 個題目，請於答案卷中依順序清楚標明回答的題項
[題組 1]（33 分）
Q1-Q11 (33% in total), please <u>fill out the blank fields</u> and <u>provide your explanations when instructed</u> on the answer book.

Nevermiss Company, which is headquartered in the country of Neverland, produces metapaste by utilizing certain pieces of equipment it leases from Lailease Finance Co., Ltd. Lailease Finance is in a perfectly competitive market and will in a few days sign a leasing contract that will specify a fixed rental payment per year from Nevermiss regardless of the metapaste firm's output level.

Lailease Finance purchased the pieces of equipment from the manufacturers for Nevermiss two days ago and made the payments of 10,000,000 Neverland Dollars (NL$) this morning. The economic life of these pieces of equipment is five years. The weighted average cost of capital for Lailease Finance is 10%. There would be no other costs and no salvage value regarding these pieces of equipment.

Board Director Agravain, who is also the chief executive officer of Nevermiss, was discussing the equation of the demand curve of the company's metapaste sales with the other members of the board.
Board director and market analysis manager Mordred stated that
(1) when price (P) is less than NL$3, q (quantity demanded) = a + bP
(2) when price is greater than or equal to NL$3, q = c + dP,
(3) An entire utility function can be graphically represented by an indifference
curve map. The representative consumer's utility function is U(t,o)=(t+2)(o+1),
where t is the consumption of metapaste and o is the consumption of other goods,
(4) When q is less than 3, quantity demanded equals 1 at price = NL$4,
(5) When q is greater than or equal to 3,
quantity demanded equals 3 at price = NL$3, and
quantity demanded equals 4 at price = NL$2, and
(6) Nevermiss Company accounts for approximately 33% of all metapaste sales in
Neverland. Two of its major competitors, Neversir and Nevermadam, account for
36% and 27% of all Neverland metapaste sales, respectively.
SVP Gingalain, who is a senior board member, watching the news on television and knowing that the current exchange rate is AL$0.8 per NL$, stated that when one sets cost as the vertical axis and sets quantity demand as the horizontal axis. Then the total cost curve would move to the left when Alwaysland currency, AL$, depreciates against NL$, the currency of Neverland.

Production manager Ywain stated that
(1) the sole material that Nevermiss uses to produce metapaste is alpaste, which is imported from the country of Alwaysland,
(2) the conversion of alpaste into metapaste relies exclusively on unskilled workers, who are paid by hours and receive the minimum wages,
(3) The standard direct material cost per unit of metapaste is AL$1.2 and the standard labor hour achievable at the expected level of efficiency is 0.9 per unit of metapaste, and
(4) Material and labor are perfect complements.

Board director Aglovale, an expert in labor market analysis, stated that
(1) the current minimum wage in Neverland is NL$0.8,
(2) if Sir de Sade wins the upcoming prime minister vote, then the minimum wage in Neverland may increase to NL$0.82.
(3) if Sir de Coverley wins the upcoming prime minister vote, then the minimum wage in Neverland may increase to NL$0.9.

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SVP Dagonet, watching the news on television and hearing that the deputy head of IRS appealed to raise tariffs, stated that the imposition of tariffs might increase the price of goods and services in the domestic markets by applying a tax on imported goods that are paid by the domestic importer.

The total cost = k + j x (the annual output level of Nevermiss).
The marginal cost = m.

Q1. a = _____ , b = _____ . **(3%)**

Q2. c = _____ , d = _____ . **(3%)**

Q3. j = NL$ _____ , m = NL$ _____ . **(3%)**

Q4. One of the only two SVP's in Nevermiss, Mr. Gingalain and Mr. Dagonet, is a true expert in Economics. Which one of these two SVP's is the true expert in Economics? _____ Why? __ **(3%)**

Q5. a. Draw a diagram showing the shape of the existing iso-quant map regarding the production of metapaste for the two factors of material and labor.
b. Draw a diagram showing the shape of the existing firm demand curve of Nevermiss. Set price as the vertical axis and firm quantity demand as the horizontal axis. **(3%)**

Q6. How much would be the expected fixed annual rental charge for the pieces of equipment Lailease Finance leases to Nevermiss? **(3%)**

Q7. If Sir de Sade wins the upcoming prime minister vote, and if the market demand function remains unchanged, then the output level of Nevermiss = _____ . **(3%)**

Q8. If Sir de Coverley wins the upcoming prime minister vote, and if the market demand function remains unchanged, then the output level of Nevermiss = _____ . **(3%)**

Q9. If each and every price across the entire spectrum of goods and services produced and/or imported in the economy increase by 100%, then the output level of Nevermiss = _____ . **(3%)**

Q10. Regarding a concern of the board regarding the threat of entrance of Almeta, the largest metapaste firm in Always Land into Neverland, Director Percival, a senior consultant of Nevermiss, stated that other things being equal, the entrance of Almeta would lead to a shift to the right of Nevermiss's demand curve. Is he telling the truth? Why? **(3%)**

Q11. a. If the government makes an announcement this evening that it will impose a corporate income tax on all lessors, then would the average cost of Nevermiss increase or decrease?
b. If the central bank of Neverland makes an announcement this evening that it raises interest rates, then would the average cost of Nevermiss increase or decrease?
c. Explain your answers to a. and b. **(3%)**

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[題組2] (33 分)

Q12-Q17 (33% in total) are <u>essay questions</u>, please <u>provide your calculations and answers</u> on the answer book

(一) (20%)

某國家的總體經濟模型與定義式,其所建構之聯立方程式有如下,其中 C 為消費支出、I 為投資形成、Y 為總產出、T 為稅賦負擔、R 為實質利率、i 為名目利率、G 為政府支出。彙整如下:

消費函數： $C=500+0.75(Y-T)-350R$
投資函數： $I=150-200R$
實質貨幣(L)之需求函數： $L=0.5Y-150i$

於預期通膨率為2%、充分就業下的總產出為2,800,且該國政府一貫維持收支平衡;請根據總體模型的架構與經濟理論,來做成問題計算與詳盡回覆:

Q12. 若貨幣供給量 M 為 5,500 且政府支出為 300 ,請問達成均衡時的實質利率、物價水準以及消費支出。

Q13. 貨幣供給量為 5,500 之下,若政府支出增為 450 且租稅亦隨之調高。請計算均衡達成時的實質利率、投資支出;並說明財政政策是否可以具有中立性呢?該國政府在收支的同步提高,是否有出現排擠效果?

Q14. 若貨幣供給量增為 7,000 且政府支出維持在 300,請問均衡達成的物價水準以及消費支出;說明貨幣中立性之經濟定義,以及該國調整經驗,貨幣中立性是否亦然成立呢?

Q15. 若貨幣供給量增為 7,000 且政府支出增為 450 、租稅亦隨之調高,同時發生的財政與貨幣政策調整,會否影響你對於貨幣中立性、排擠效果的判斷呢?

(二) (13%)

Q16. 面對美國前總統川普的關稅開徵與推動鋼、鋁業的進口配額,以及拜登上任以後所推動的綠色能源、產業補貼,請分別模擬川普與拜登之決策情境與政治訴求;以及為何歐盟等國家,會在世貿組織對美國晚近的貿易措施,提出爭議的訴訟救濟呢?請引述相關的經濟理論作答。

Q17. 展望未來,其於美國企業的跨國投資、供應鏈佈局、銷售市場的地域經營和採購、外包來源地等的決策上,將有何種衝擊與具體變化發生呢? 試依據蘋果公司等企業,其政治遊說、變革因應的報導來做為設想案例,並一一辯護你的應對主張。

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[題組 3]（34 分）

Q18-Q21 (3% each question, 12% in total) are <u>multiple-choice questions</u>, please choose the best possible answer out of the choices from the list, and <u>provide your answers</u> on the answer book

Whereas United States economic productivity grew at an annual rate of 3 percent from 1945 to 1965, it has grown at an annual rate of only about 1 percent since the early 1970's. What might be preventing higher productivity growth? Clearly, the manufacturing sector of the economy cannot be blamed. Since 1980, productivity improvements in manufacturing have moved the United States from a position of acute decline in manufacturing to one of world prominence. Manufacturing, however, constitutes a relatively small proportion of the economy. In 1992, goods-producing businesses employed only 19.1 percent of American workers, whereas service-producing businesses employed 70 percent. Although the service sector has grown since the late 1970's, its productivity growth has declined.

Several explanations have been offered for this declined and for the discrepancy in productivity growth between the manufacturing and service sectors. One is that traditional measures fail to reflect service-sector productivity growth because it has been concentrated in improved quality of services. Yet traditional measures of manufacturing productivity have shown significant increases despite the undermeasurement of quality, whereas service productivity has continued to stagnate. Others argue that since the 1970's, manufacturing workers, faced with strong foreign competition, have learned to work more efficiently in order to keep their jobs in the United States, but service workers, who are typically under less global competitive pressure, have not. However, the pressure on manufacturing workers in the United States to work more efficiently has generally been overstated, often for political reasons. In fact, while some manufacturing jobs have been lost due to foreign competition, many more have been lost simply because of slow growth in demand for manufactured goods.

Yet another explanation blames the federal budget deficit: if it were lower, interest rate would be lower too, thereby increasing investment in the development of new technologies, which would spur productivity growth in the service sector. There is, however, no dearth of technological resources; rather, managers in the service sector fail to take advantage of widely available skills and machines. High productivity growth levels attained by leading-edge service companies indicate that service sector managers who wisely implement available technology and choose skillful workers can significantly improve their companies' productivity. The culprits for service-sector productivity stagnation are the forces—such as corporate takeovers and unnecessary governmental regulation—that distract managers from the task of making optimal use of available resources.

Q18. Which of the following, if true, would most weaken the budget deficit explanation for the discrepancy mentioned in the passage?
    A. Research shows that the federal budget deficit has traditionally caused service companies to invest less money in research and development of new technologies.
    B. New technologies have been shown to play a significant role in companies that have been able to increase their service productivity.
    C. In both service sector and manufacturing, productivity improvements are concentrated in gains in quality.
    D. The service sector typically requires larger investments in new technology in order to maintain productivity growth than dose manufacturing.
    E. High interest rates tend to slow the growth of manufacturing productivity as much as they slow the growth of service-sector productivity in the United States.

Q19. The passage states which of the following about the effect of foreign competition on the American manufacturing sector since the 1970's?
    A. It has often been exaggerated.
    B. It has not been a direct cause of job loss.

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C. It has in large part been responsible for the subsequent slowing of productivity growth.

D. It has slowed growth in the demand for manufactured goods in the United States.

E. It has been responsible for the majority of American jobs lost in manufacturing.

Q20. It can be inferred from the passage that which of the following was true of the United States manufacturing sector in the years immediately prior to 1980?

A. It was performing relatively poorly.

B. It was in a position of world prominence.

C. It was increasing its productivity at an annual rate of 3 percent.

D. It was increasing its productivity at an annual rate of 1 percent.

E. Its level of productivity was higher than afterward.

Q21. The author of the passage would be most likely to agree with which of the following statements about productivity improvements in United States service companies?

A. Such improvements would be largely attributable to efficiencies resulting from corporate takeovers.

B. Such improvements would depend more on wise implementation of technology than on managers' choice of skilled workers.

C. Such improvements would be more easily accomplished if there were fewer governmental regulations of the service sector.

D. Such improvements would require companies to invest heavily in the development of new technologies.

E. Such improvements would be attributable primarily to companies' facing global competitive pressure.

Q22-Q24 (11% in total) are <u>essay questions,</u> please <u>provide your calculations and answers</u> on the answer book

A local supermarket puts out products at an initial price, and every week the product goes unsold, its price is discounted by 25% of the original price. If it is not sold after four weeks, it is sent back to the regional warehouse. There is a set of Chef's knives that was just put out for the price of $200. Your willingness to pay for the knives (your dollar value) is $ 180, so if you buy them at a price P, your payoff is $u = 180 - P$. If you don't buy the knives, the chances that they are sold to someone else conditional on not selling in the week before are given in the following table:

Week 1: 0.2
Week 2: 0.4
Week 3: 0.6
Week 4: 0.8

For example, if you do not buy it during the first two weeks, the likelihood that it is available at the beginning of the third week is the likelihood that it does not sell in either Weeks 1 and 2, which is $0.8 \times 0.6 = 0.48$.

Q22. Draw your decision tree for the four weeks after the knives are put out for sale. **(3%)**

Q23. At the beginning of which week, if any, should you run to buy the knives? **(4%)**

Q24. Find a willingness to pay for the knives that would make it optimal to buy at the beginning of the first week. **(4%)**

Q25-Q27 (11% in total) are <u>essay questions,</u> please <u>provide your calculations and answers</u> on the answer book

Two employees sign up for a business plan competition within the marketing department. Each can invest time in their own project: either no time, one week, or two weeks (these are the only three options). The cost of time is 0 for no time, and week costs 1 unit of payoff. The more time an employee puts in the better their work will be, so that if one employee puts in more time than the other, there will be a clear "winner". If they put in the same amount of time, then their business plan projects will have the same quality.

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If there is a clear winner, then the winning employee will be awarded first-place prize in the competition. However, if they are equally good, the head of the marketing department will toss a fair coin to decide who wins first place in the competition. The first-place prize is worth 3 units of payoff, while the other employee who does not win in the competition will get nothing.

Q25. Write down this game in matrix form. **(3%)**

Q26. Are there any strictly dominated strategies? Are there any weakly dominated strategies? **(4%)**

Q27. Find the unique mixed strategy Nash equilibrium. **(4%)**

試題隨卷繳回