I. Multiple Choices (50 points)

1. Peter Drucker, in his book "Managing in the next Society" referring which factor of the following is the most important one for entrepreneurs? (A) profitability (B) cash flow (C) market share (D) productivity. (5 points)

2. Warren Buffet once said that if he wants to find out how a company is doing, he listens to (A) security analysts (B) Bank credit Analysts (C) statistical analysts (D) intuitive analysts (5 points)

3. In his worldwide bestseller The Innovator's Dilemma, Clayton Christensen explained how industry leaders get blindsided by (A) disruptive innovation (B) constructive innovation (C) sustaining innovation (D) discontinuing innovation. (5 points)

4. Why is consistent, persistent growth so difficult to achieve? In The Innovator's Solution, Clayton Christensen and Michael Raynor interpreted that because of (A) lack of ideas or capable managers (B) customers are too fickle (C) innovation too unpredictable (D) organizations unwittingly strip the disruptive potential from new ideas before they ever see the light of the day. (5 points)

5. By innovation we mean "Winning customer preference through the successful exploitation of new ideas, technologies, products, services, and practices," then which following item is not innovation? (A) credit card (B) management (C) textbooks (D) an invention in a R&D laboratory (5 points)

6. Which description is appropriate for Mainland China? (A) Real GDP growth averaged 5 percent for the period 1997-1998 (B) The share of the labor force in agriculture grew from 35 percent in 1977 to 45 percent in 1998. (C) By 1998, China had a foreign trade surplus of $4 billion and had accumulated $15 billion in foreign exchange reserves (D) Remarkable economic progress was made while political reforms and freedom were sharply curbed. (5 points)

7. The villain of cost disease of the personal services is (A) the stagnation of the economy (B) the economy's productivity growth rate (C) the deterioration of social system (D) the inefficiency of government (5 points)

8. George Washington, the history books tell us, was beset by many enemies during 1777-1778, including the British, their Hessian mercenaries, and the merciless winter
weather. But he had another enemy that the history books ignore: (A) leadership (B) heavy taxing (C) price control (D) morale (5 points)

9. Some people believe that the MPC (marginal propensity to consume) in Japan in 2001 was extremely low because consumers were insecure. If so (A) tax-cut multiplier = expending multiplier (B) tax-cut multiplier > expending multiplier (C) tax-cut multiplier < expending multiplier (D) uncertain (5 points)

10. Who wrote in his book, "The successful investor" that by using economic indicators to predict stock had never been effective, because the market was not influenced by the economy but vice versa. (A) Peter Lynch (B) David Ricardo (C) William J. O’Neil (D) Andre Kostolany (5 points)

II. (20 points) Consider two herders, Ann (A) and Bob (B) who are deciding how many of the yaks to graze on the village common. Let $Y_A$ and $Y_B$ represent the numbers of yaks that are brought to the common for herders Ann and Bob, respectively. Suppose that the per yak value of grazing on the common is given by

$$V(Y_A, Y_B) = 800 - (Y_A + Y_B)^2$$

Hence, $V_i < 0$ and $V_{ii} < 0$. Herder $i$ ($i = A$ or $B$) faces the following maximization problem:

$$\text{MAX} \quad V \quad \text{subject to} \quad Y_i \leq Y_i^*$$

Let the total wealth of herder $i$ be defined as $W_i = Y_i V$ for $i = A, B$. The game is played just once.

(1) Define the Nash equilibrium for this game. Find out the Nash equilibrium of this one-period game. Calculate the values of $W^A$ and $W^B$. (5 points)

(2) Show the results for the social optimum (cooperative strategy) values of $Y_A$ and $Y_B$. What are the values of $W^A$ and $W^B$ in this case? (5 points)

(3) Define each player's strategy space as [cooperative strategy, non-cooperative strategy]. Express the game in normal form to show that this game is indeed similar to the game of prisoner's dilemma? Show that the cooperative strategy is not stable. (5 points)

(4) If the game is infinitely repeated and the discount rate is denoted as $\delta$, show the sub-game perfect NE. How do you interpret the discount rates ($\delta$) required here for cooperation? Provide economic interpretation in this case. (5 points)
III. (20 points) Consider the Cournot duopoly model where inverse demand is given by
\[ P(Q) = a - Q \] but firms has asymmetric marginal costs: \( C_1 \) for firm 1 and \( C_2 \) for
firm 2.

(1) What is the Nash equilibrium if \( 0 < C_i < a/2 \) for each firm? \((6 \text{ points})\)

(2) Suppose that \( C_1 = C_2 = C \) and the game is played twice. What is the subgame
perfect Nash equilibrium? Show your results. \((6 \text{ points})\)

(3) Suppose that \( C_1 = C_2 = C \) and the game is played infinitely. What is the subgame
perfect Nash equilibrium? Show your results. \((8 \text{ points})\)

IV. (10 points) Success in the textbook market requires three things: a good book (the
author’s responsibility); an attractive book (the designer’s responsibility); and an
effective sales effort (the responsibility of the sales staff). The author typically is paid a
royalty for each book sold, equal to something like 15% of the wholesale price of the
book; the designer typically is a salaried member of publisher’s staff; and individual
salesman often receive a percentage commission on the sales they make. How do these
compensation arrangements influence the incentives of the affected parties? Why are
designers paid a salary instead of a commission? Why do publishers not pay authors a
fixed sum to produce books? Why are commissions so often used in sales instead of
salaries?