科目：經濟學　　　　　　系所：金融管理學系

考試時間：100 分鐘　　　本科原始成績：100 分　　　是否使用計算機：是

I. Multiple Choice Questions (4 points each, total 80 points)

1. Suppose a person has \$20 and likes both rap music (R) and country music (C) with a set of preferences so that $U = C^{1/2}R^{1/2}$. Suppose that the iTunes price of a rap music song is $P_R = 2$ and the price of a country music song is $P_C = 1$. What is the lowest level of utility that is unaffordable?
(a) 6
(b) 7
(c) $\sqrt{50}$
(d) 8

2. Suppose that $U = \min(X, Y)$ and the price of X is 1, the price of Y is 1 and income is \$12. If the price of X increases to 2, the substitution effect is
(a) 2
(b) -1
(c) 0
(d) -2

3. Suppose a family has saved enough for a 10 day vacation (the only one they will be able to take for 10 years) and has a utility function $U = V^{1/2}$ (where V is the number of healthy vacation days they experience). Suppose they are not a particularly healthy family and the probability that someone will have a vacation-ruining illness ($V = 0$) is 20%. What is the expected value of V?
(a) 10
(b) 8
(c) 2
(d) 0

4. Continuing with the same family from the preceding question, suppose a risk neutral insurance company exists to provide vacation insurance. Suppose further that each vacation day requires a constant expenditure, and this expenditure is standard across everybody. This allows us to simplify the problem by considering all payments to be in terms of vacation days. What is the least the insurance company would charge (in terms of vacation days)?
(a) 1
(b) 2
(c) 3
(d) 4

5. Risk averse individuals will diversify their investments because this will
(a) increase their expected returns.
(b) provide them with some much-needed variety.

(c) reduce the variability of their returns.

(d) reduce their transactions costs.

6. Suppose there are 100 firms each with a short run total cost of STC = q^2 + q + 10. The market supply curve is

(a) Q_s = −50 + 50P

(b) $Q_s = -\dfrac{1}{2} + \dfrac{1}{2}P$

(c) Q_s = −100 + 100P

(d) Q_s = −50 + 50P^2

7. The principal difference between economic profits for a monopolist and for a competitive firm is that

(a) monopoly profits create major problems of equity whereas competitive profits do not.

(b) competitive profits exist only in the short run whereas monopoly profits may exist in the long run as well.

(c) monopoly profits represent a transfer out of consumer surplus whereas competitive profits do not.

(d) monopoly profits are considered a deadweight loss but competitive profits are not.

8. For a monopsonistic hirer of labor, the gap between labor's marginal value product and its wage rate will be greater

(a) the more elastic the supply curve for labor.

(b) the more inelastic the supply curve for labor.

(c) the more elastic the firm's demand for labor.

(d) the more inelastic the firm's demand for labor.

9. Suppose a farmer is a price taker in soybeans with cost functions given by

　　TC = 0.1q^2 + 2q + 100

Suppose the farmer has to purchase a license for \$50 per period in order to stay in business. In this case, its marginal cost function is

(a) MC = 0.2q + 2

(b) MC = 0.2q + 50

(c) MC = 0.2q + 52

(d) MC = 50

10. Two games that differ only in the timing of moves — one simultaneous, the other sequential move — can sometimes have completely different subgame-perfect equilibria. Why?

(a) The second mover to choose non-credible threats.

(b) The first mover can choose an action that it would deviate from if its action were secret.

(c) Subgame-perfect equilibrium cannot be applied to simultaneous games.

(d) All of the above.

11. In the macroeconomic long run,
(a) GDP always is below potential GDP.
(b) there is full employment with no unemployment.
(c) output always is above potential GDP.
(d) there is full employment and real GDP is equal to potential GDP.

12. The supply of real GDP is a function of
(a) the total expenditures of consumers, investors and government.
(b) the sum of wages, salaries, corporate profits, rents and interest.
(c) only the state of technology.
(d) the quantities of labor, capital and the state of technology.

13. Which of the following events will increase long-run aggregate supply?
(a) an increase in the interest rate
(b) an increase in resource prices
(c) a decrease in expected profit
(d) an advance in technology

14. Fiscal policy includes
(a) only decisions related to government expenditure on goods and services.
(b) only decisions related to government expenditure on goods and services and the value of transfer payments.
(c) only decisions related to the value of transfer payments and tax revenue.
(d) decisions related to government expenditure on goods and services, the value of transfer payments, and tax revenue.

15. By definition, a government budget deficit is the situation that occurs when the
(a) government outlays exceed what it receives in taxes.
(b) government miscalculated how much it will receive in taxes.
(c) government spends money on things which do not produce revenue, such as schools.
(d) economy goes into a recession.

16. Monetary policy affects real GDP by
(a) changing aggregate supply.
(b) creating budget surpluses.
(c) changing aggregate demand.
(d) creating budget deficits.

17. The Fed engages in open market operations and sells government securities. The result is
(a) a lower federal funds rate.
(b) a higher federal funds rate.
(c) an unchanged federal funds rate because other interest rates did not change.
(d) More information is needed to determine what happens to the federal funds rate.

18. If the Fed responds to an increase in aggregate demand by increasing the quantity of money,
(a) nothing happens because aggregate demand had already increased.
(b) output will begin to decrease more rapidly than otherwise.
(c) money wage rates will fall to reduce the unemployment.
(d) there will be continued inflation.

19. Oil prices increase sharply, raising the price level and decreasing real GDP. The Fed has an incentive to
(a) increase the quantity of money in order to reduce unemployment.
(b) decrease the quantity of money in order to reduce unemployment.
(c) increase the quantity of money in order to reduce the price level.
(d) increase the quantity of money in order to reduce the price level and unemployment.

20. During the financial crisis of 2008-2009, the Fed was concerned about
(a) the bubble that was forcing asset prices higher.
(b) the publics rush to deposit its currency into banks.
(c) keeping the federal funds rate from falling too far.
(d) providing the banking system with enough liquidity.

II. Problem Solving and Essay Questions (10 points each, total 20 points)

1. Suppose the market for oranges is perfectly competitive and unregulated. Suppose also that the chemicals used to keep the oranges insect-free damage the environment by an estimated $1 per bushel of oranges. Suppose $Q_D = 1000 - 100P$ and $Q_S = -100 + 100P$.
(a) Please calculate the total dollar value damage to society.
(b) Please calculate the price that consumers would have to pay for the market to achieve the socially optimal level of production.

2. What is the effect of lowering the interest rate on net exports? Please explain your answer.