國立雲林科技大學
96學年度碩士班入學招生考試試題

系所：財金系、工管所、運籌所
科目：經濟學

本份試卷共 50 題單選題，每題 2 分

1. In response to news reports that taking aspirin daily can reduce an individual's risk of a heart attack, there will most likely be a(n)
   A. increase in the supply of aspirins.
   B. decrease in the supply of aspirins.
   C. increase in the demand for aspirins.
   D. increase in the quantity demanded of aspirins.

2. Consumer surplus will be zero at any quantity if
   A. supply is perfectly elastic.
   B. supply is perfectly inelastic.
   C. demand is perfectly elastic.
   D. demand is perfectly inelastic.

3. A firm is currently producing in the inelastic portion of its demand curve. What course of action should you recommend to this firm?
   A. Continue producing at the current output level, because the firm will maximize its total revenue by producing in the inelastic portion of its demand curve.
   B. Reduce price, because if demand is inelastic and price is reduced, total revenue will increase.
   C. Increase price, because if demand is inelastic and price is increased, total revenue will increase.
   D. Continue selling at the same price, but increase the number of units it produces.

4. The government is considering placing a tax on cigarettes to raise revenue to finance health care benefits. One of the arguments for this tax is that the demand for cigarettes is price inelastic. Which of the following statements is TRUE?
   A. The tax on cigarettes may not raise as much revenue as anticipated in the years to come because the demand for cigarettes is likely to become more elastic over time.
   B. This is a very good way to raise revenue both in the short term and in the long term because there are no substitutes for cigarettes.

C. This tax will not raise much revenue either in the short term or the long term because demand is price inelastic.
D. No tax revenue can be raised in this way because sellers of cigarettes will just lower their price by the amount of the tax and therefore the price of cigarettes to consumers will not change.

5. For Tom, the marginal utility of the first cup of coffee he drinks in the morning is worth $2.00. The marginal utility of the 9th cup of coffee he drinks is positive and the marginal utility of the 10th cup of coffee he drinks in the morning is worth $0. This implies that at a price of $0, Tom
   A. would drink an infinite number of cups of coffee each morning.
   B. would drink at least 10 cups of coffee per morning.
   C. would drink more than 10 cups of coffee per morning, but the actual number is indeterminate from this information.
   D. would drink zero cups of coffee per morning.

6. Assuming that charitable giving is a normal good, the income effect of a decrease in personal tax rates should
   A. lead to less giving because giving to charity would become more expensive relative to other goods.
   B. lead to more giving because giving to charity would become less expensive relative to other goods.
   C. lead to more giving because households would have more disposable income.
   D. lead to less giving because households would spend that money on luxury goods.

7. If the substitution effect of a wage change outweighs the income effect of a wage change, the labor-supply curve is
   A. upward sloping.
   B. horizontal.
   C. vertical.
   D. backward bending.

8. Jerry sells cherry sno-cones along the boardwalk in New Jersey. During the summer this is a perfectly competitive business, and Jerry faces a perfectly elastic demand curve. If he wants to try to increase revenues he should
   A. raise the price of his sno-cones to make more per sale.
   B. lower the price of his sno-cones to try to sell more.
   C. keep the price the same but produce more to increase sales.
   D. do nothing; there is nothing he can do to increase revenue.

9. If the marginal product of labor equals the average product of labor, then the
   A. average product is maximized.
   B. marginal product is maximized.
   C. marginal product is still increasing.
   D. average product is still increasing.

10. You own a building that has four possible uses: a cafe, a craft store, a hardware store, and a bookstore. The value of the building in each use is $2,000; $3,000; $4,000; and $5,000, respectively. You decide to open a hardware store. The opportunity cost of using this building for a hardware store is
    A. $2,000, the value if the building is used as a cafe.
    B. $3,000, the value if the building is used as a craft store.
    C. $10,000, the sun of the values if the building is used for a cafe, a craft store, or a bookstore.
    D. $5,000, the value if the building is used for a bookstore.

11. The total cost curve for a firm can be derived from isoquants and isocost lines by
    A. varying the prices of capital and labor and keeping total expenditure constant.
    B. varying production technologies, but keeping input prices and expenditure levels constant.
    C. varying total expenditures while keeping input prices and production technology constant.
    D. varying the price of either capital or labor while keeping total expenditures and production technology constant.

12. If a firm's demand curve is perfectly elastic, then at the profit maximizing level of output
    A. P = MR = MC.
    B. P > MR > MC.
    C. P < MR < MC.
    D. P > 0 and MR = 0.

13. A firm suffers operating losses if
    A. price exceeds average variable cost but is less than average total cost.
    B. price exceeds marginal cost.
    C. revenues are smaller than variable costs of production.
    D. revenues are greater than variable costs of production but less than total costs.

14. If a firm is incurring an operating loss, in the short run the firm should _____ and in the long run the firm should _____.
    A. produce where MC = MR; exit the industry
    B. shut down; exit the industry
    C. produce where MC = MR; expand
    D. shut down; expand

15. Engineers for The All-Terrain Bike Company have determined that a 15% increase in all inputs will cause a 15% increase in output. Assuming that input prices remain constant, you correctly deduce that such a change will cause _____ as output increases.
    A. average costs to increase
    B. average costs to decrease
    C. average costs to remain constant
    D. marginal costs to increase

16. Assume the peanut industry, a perfectly competitive industry, is in long-run equilibrium with a market price of $5. If demand for peanuts increases and this industry is a decreasing-cost industry, long-run equilibrium will be reestablished at a price
    A. greater than $5.
    B. less than $5.

C. equal to $5.
D. either greater than or less than $5, depending on the number of firms that enter the industry.

17. Assuming labor is the only variable factor of production, production of a good will occur
A. as long as the marginal revenue product of labor is positive.
B. if society values a good more than it costs firms to hire the workers to produce the good.
C. as long as the product's price is greater than the marginal revenue product of labor.
D. if the marginal cost of a unit of output equals the marginal revenue product of labor.

18. Because petroleum is fixed in supply, its price is
A. demand determined.
B. supply determined.
C. inelastic.
D. independently determined.

19. The number of seats available in a stadium is fixed at 80,000. The equilibrium price for a ticket to a football game at the stadium is $30. The equilibrium price for a ticket to a soccer match at the stadium is $10. Which of the following is TRUE?
A. Football games must be more expensive to produce than a soccer match.
B. The demand for each football game must be more than the demand for each soccer match.
C. The supply of soccer matches must be less elastic than the supply of football games.
D. The demand for each soccer game must be greater than the demand for each football game.

20. Joe and Carl are both reporters and they both have the same productivity. They each can write five articles a week. Joe writes articles about celebrities. Carl writes articles about economics. Joe earns twice as much as Carl. Which of the following could explain this?

A. There are more reporters writing about celebrities than there are reporters writing about economics.
B. The output effect is greater for celebrity writers than economics writers.
C. There must be more substitutes available for economics writers than there are for celebrity writers.
D. People are willing to pay more for stories about celebrities than for stories about economics.

21. When market interest rates _____, _____ investment projects are undertaken.
A. decrease; more
B. increase; more
C. decrease; less
D. increase; no

22. Monopolistic competition differs from perfect competition primarily because in
A. monopolistic competition, firms can differentiate their products.
B. perfect competition, firms can differentiate their products.
C. monopolistic competition, entry into the industry is blocked.
D. monopolistic competition, there are relatively few barriers to entry.

23. An oligopoly with a dominant price leader will produce an output level that is _____ than the output level that would prevail if the industry were a monopoly and sells it at a price that is _____ than the price that would prevail if the industry were a monopoly.
A. higher; higher
B. higher; lower
C. lower; lower
D. lower; higher

24. You want to purchase a new car. You have gone to 3 dealerships that sell the type of car you want. The price of the car is different at each of the dealerships. You have estimated that if you go to another dealership, the marginal amount you may save will be $250, but the marginal cost of going to the dealership would be $350. Which of the following statements is accurate?

A. You should go to the next dealership, as you would be able to save an additional $250.
B. In order to determine whether or not you should go to the next dealership, you would need to know the total costs and total benefits of this action.
C. You should not go to the next dealership because the marginal cost of this action exceeds the marginal benefit.
D. You should continue going to dealerships as long as the marginal benefit of additional search is positive.

25. If the payroll tax for Social Security in the United States were levied on all wage and salary income instead of just the first $87,000 of wage and salary income, the payroll tax would be
A. regressive.
B. progressive.
C. proportional.
D. an ability-to-pay tax.

26. Assume that apples cost $0.50 in 2002 and $1 in 2007, whereas oranges cost $1 in 2002 and $1.50 in 2007. If 4 apples were produced in 2002 and 5 in 2007, whereas 3 oranges were produced in 2002 and 5 in 2007,then the GDP deflator in 2007, using a base year of 2007, was approximately:
A. 1.5
B. 1.7
C. 1.9
D. 2.0

27. If there are 100 transactions in a year and the average value of each transaction is $10, then if there is $200 of money in the economy, transactions velocity is _____ times per year.
A. 0.2
B. 2
C. 5
D. 10

28. If income velocity is assumed to be constant, but no other assumptions are made, the level of ___ is determined by the quantity of money.
A. prices
B. income
C. transactions
D. nominal GDP

29. The percentage change in the price level is approximately equal to the percentage change in:
A. the quantity of money.
B. the quantity of money minus the percentage change in real output.
C. the quantity of money minus the percentage change in real output plus the percentage change in the transactions velocity of money.
D. the quantity of money minus the percentage change in real output minus the percentage change in the transactions velocity of money.

30. If the nominal exchange rate falls by 10 percent, the domestic price level rises by 4 percent, and the foreign price level rises by 6 percent, the real exchange rate will fall by:
A. 0 percent
B. 8 percent
C. 10 percent
D. 12 percent

31. In a small open economy, if the introduction of automatic-teller machines reduces the demand for money, then net exports:
A. fall and the real exchange rate falls.
B. fall but the real exchange rate remains unchanged.
C. remain unchanged but the real exchange rate falls.
D. and the real exchange rate remain unchanged.

32. Assume that some large foreign countries begin to subsidize investment by instituting an investment tax credit. Then, if world saving does not depend on the interest rate, world investment:
A. will rise and home country investment will fall.
B. will rise and home country investment will remain unchanged.
C. will remain unchanged and home country investment will fall.
D. and home country investment will both remain unchanged.

33. Assume that a war breaks out abroad, and foreign investors choose to invest more in a large safe country, the United States. Then, the U.S. real interest rate:
A. and net exports will both fall.
B. will fall and net exports will rise.
C. will rise and net exports will fall.
D. and net exports will both rise.

34. If the rate of separation is 0.02 and the rate of job finding is 0.08 but the current unemployment rate is 0.10, then the current unemployment rate is _____ the equilibrium rate, and in the next period it will move _____ the equilibrium rate.
A. above; toward
B. above; away from
C. below; toward
D. below; away from

35. Assume that a country experience a reduction in productivity that shifts the labor demand curve downward and to the left. If the labor market were always in equilibrium, this would lead to:
A. a lower real wage and a rise in unemployment.
B. a lower real wage and no change in unemployment.
C. a lower real wage and less unemployment.
D. no change in real wage or in unemployment.

36. If the per-worker production function is given by $y = k^{1/2}$, where y is output per worker, and k is capital per worker, the saving rate is 0.2, and the depreciation rate is 0.1, then the steady-state ratio of capital to labor is:
A. 1
B. 4
C. 2
D. 9

37. Assume that a war reduces a country's labor force but does not directly affect its capital stock. If the economy was in a steady state before the war and the saving rate does not change after the war, then, over time, capital per worker will _____ and output per worker will grow _____ than it did before the war.

A. decline; faster
B. decline; more slowly
C. increase; faster
D. increase; more slowly

38. If the U.S. production function is Cobb-Douglas with capital share 0.3, output growth is 3 percent per year, depreciation is 4 percent per year, and the Golden Rule steady-state capital-output ratio is 4.29, to reach the Golden Rule steady state, the saving rate must be:
A. 17.5 percent
B. 25 percent
C. 30 percent
D. 42.9 percent

39. If the marginal product of capital net of depreciation equals 8 percent, the rate of growth of population equals 2 percent, and the rate of labor-augmenting technical progress equals 2 percent, to reach the Golden Rule level of the capital stock the _____ rate in this economy must be _____.
A. saving; increased
B. population growth; decreased
C. depreciation; decreased
D. total output growth; decreased

40. If the production function is $Y = A \cdot K^{2/3} \cdot L^{1/3}$ in the land of Solovia, where A is a parameter measuring the productivity of technology, K denotes the amount of capital, and L denotes the amount of labor, and the labor force increases by 5 percent while capital is constant, labor productivity will:
A. increase by 3.33 percent.
B. increase by 1.67 percent.
C. decrease by 1.67 percent.
D. decrease by 3.33 percent.

41. The rate of growth of labor productivity (Y/L) may be expressed as the rate of growth of total factor productivity:
A. plus the capital share multiplied by the rate of growth of the capital-labor ratio.

B. minus the capital share multiplied by the rate of growth of the capital-labor ratio.
C. plus the rate of growth of capital productivity.
D. minus the rate of growth of capital productivity.

42. If the demand for money increases, but the central bank keeps the money supply the same, then in the short run output will:
A. fall and in the long run prices will remain unchanged.
B. remain unchanged and in the long run prices will fall.
C. remain unchanged and in the long run prices will remain unchanged.
D. fall and in the long run prices will fall.

43. If the central bank reduces the money supply by 5 percent, then the real interest rate will:
A. rise both in the short run and the long run.
B. rise in the short run but return to its original equilibrium level in the long run.
C. rise in the short run but will fall below its original equilibrium level in the long run.
D. be unaffected both in the short run and the long run.

44. If central bank A cares only about keeping the price level stable and central bank B cares only about keeping output at its natural level, then in response to an exogenous increase in the price of oil:
A. both central bank A and central bank B should increase the quantity of money.
B. central bank A should increase the quantity of money whereas central bank B should keep it stable.
C. central bank A should keep the quantity of money stable whereas central bank B should increase it.
D. both central bank A and central bank B should keep the quantity of money stable.

45. Consider the impact of an increase in thriftiness in the Keynesian-cross analysis. Assume that the marginal propensity to consume is unchanged, but the intercept of the consumption function is made smaller so that at every income level saving is greater. This will:

A. lower equilibrium income by the decrease in the intercept multiplied by the multiplier.
B. lower equilibrium income by the decrease in the intercept.
C. raise equilibrium income by the decrease in the intercept.
D. rise equilibrium income by the decrease in the intercept multiplied by the multiplier.

46. The increase in income in response to a fiscal expansion in the IS-LM is:
A. always less than in the Keynesian-cross model
B. less than in the Keynesian-cross model unless the LM curve is vertical
C. less than in the Keynesian-cross model unless the LM curve is horizontal
D. less than in the Keynesian-cross model unless the IS curve is vertical

47. In a small, open economy with a floating exchange rate, the exchange rate will depreciate if
A. taxes are decreased.
B. import quotas are imposed.
C. government spending is increased.
D. the money supply is decreased.

48. If the demand function for money is $\frac{M}{P} = 0.5 \cdot Y - 100 \cdot r$, where M stands for the quantity of money, P stands for the price level, Y stands for income, and r stand for interest rate, then the slope of the LM curve is
A. 0.001
B. 0.005
C. 0.01
D. 0.05

49. If the demand function for money is $\frac{M}{P} = 0.5 \cdot Y - 100 \cdot r$ and if $\frac{M}{P}$ increases by 100, then the LM curve for any given interest rate shifts to the:
A. left by 100.
B. left by 200.
C. right by 100.
D. right by 200.

50. Other things equal, a given change in money supply has a larger effect on demand the:
A. flatter the IS curve.
B. steeper the IS curve.
C. smaller the interest sensitivity of expenditure demand.
D. smaller the income sensitivity of expenditure demand.

國立雲林科技大學
96學年度碩士班入學招生考試試題

系所：財金系、企管系
科目：微積分

1. Consider the function defined on $\Re^2$: $f(x,y)=\begin{cases}\dfrac{x^2-y^2}{x^2+y^2}, if\,(x,y)\neq(0,0),\\ 0, if\,(x,y)=(0,0).\end{cases}$

   determine whether the following limits exist and evaluate those limits that do exist: $\lim\limits_{x\to 0}\left[\lim\limits_{y\to 0} f(x,y)\right], \lim\limits_{y\to 0}\left[\lim\limits_{x\to 0} f(x,y)\right], \lim\limits_{(x,y)\to(0,0)} f(x,y)$. (10%)

2. Let $f_n(x)=\dfrac{x^{2n}}{1+x^{2n}}, x\in\Re, n=1,2,\ldots$, and then determine its limit function. (10%)

3. Prove that the set $[0,1]=\{x: 0\le x\le 1\}$ is uncountable. (10%)

4. Let $f(x)=\begin{cases}x\sin\dfrac{1}{x}, x\neq 0,\\ 0, x=0.\end{cases}$ (a) Is $f(x)$ continuous at $x=0$? (b) Does $f(x)$ has a derivative at $x=0$? Show your answer. (10%)

5. Evaluate $\lim\limits_{x\to 0^+}\dfrac{\ln\tan 2x}{\ln\tan 3x}$ (10%)

6. A company manufactures A and B two products, and its monthly profit, say $\pi(x, y)$, is given by $\pi(x,y)=-x^2+xy-\dfrac{1}{2}y^2+40x+20y-110$, where, the unit of π is thousand of dollars. Moreover, x and y stand for the quantity of A and B, respectively, which are hundred of units. If the total monthly output of the company is 1000 units, find the optimal level of production of each product to attain maximum profit? What is the maximum profit? (10%)

7. Evaluate the value of the series $\sum\limits_{n=0}^{\infty}\dfrac{1}{(n-1)!(n+1)}$. (10%)

8. Find a curve in xy-plane that passes through $P(1,4)$ and whose tangent at $Q(x,y)$ has slope $\dfrac{y}{x}+1$. (10%)

9. Evaluate the line integral of $\int_C -(xy+z^2)ds$, where, C is the straight line from $P(0,1,0)$ to $Q(-2,4,3)$. (10%)

10. Find the value of the improper integral $\int_0^{\infty} 5^{-4x^{0.4}}\,dx$. (10%)

國立雲林科技大學
96.學年度碩士班入學招生考試試題

系所：財金系
科目：統計學

Note:
There are four questions in this test. Each of them includes a couple of sub-questions. The weight of each sub-question for each question is shown in point.

1. Suppose that a discrete variable X has the probability density function(p.d.f.)

$$f(x) = \frac{m^x e^{-m}}{x!} \quad , \quad x = 0, 1, 2, \ldots\ldots\ldots,$$

$$= 0 \qquad \text{elsewhere.}$$

The moment-generating function of the variable X can be defined as

$M(t) = E(e^{tx})$, where E = expectation.

a. (10 points) Recall that the series

$$1 + m + \frac{m^2}{2!} + \frac{m^3}{3!} + \ldots\ldots\ldots = \sum_{x=0}^{\infty} \frac{m^x}{x!} \to e^m \quad \text{for all values of m.}$$

Find the values of $M'(t)$ and $M''(t)$

b. (5 points) Find the values of mean(μ) and variance(σ^2) of the variable X p.d.f.

c. (10 points) Find the value of skewness ($E\left[(x-\mu)^3\right]/\sigma^3$) and Kurtosis ($E\left[(x-\mu)^4\right]/\sigma^4$) of the variable X p.d.f.

2. Suppose that $X_1, X_2, \ldots\ldots\ldots, X_n$ is a random sample from a normal distribution $N(\mu, \sigma^2)$ and $S^2 = \sum_{i=1}^{n} (x_i - \bar{x})^2 / n$.

a. (12 points) Find the mean and variance of S^2.

b. (6 points) Let n=6 and σ^2=12. Find the probability Pr(2.30 < S^2 <22.2).

c. (7 points) Let n=25, μ=3, and σ^2=100. Find the probability

Pr(0 < $\bar{x}$ <6, 55.2 < S^2 < 145.6).

3. (20 points)

a. (5points) Construct a 94% confidence interval for the difference between the mean lifetimes of two kinds of light bulbs, given that a random sample of 40 light bulbs of the first kind lasted on the average 418 hours of continuous use and 50 light bulbs of the second kind lasted on the average 402 hours of continuous use. The population standard deviations are known to be $\sigma_1 = 26$ and $\sigma_2 = 22$.

b. (5points) In a random sample, 136 of 400 persons given a flu vaccine experienced some discomfort. Construct a 95% confidence interval for the true proportion of persons who will experience some discomfort from the vaccine.

c. (5points) If 132 of 200 male voters and 90 of 159 female voters favor a certain candidate running for mayor of Taipei city, find a 99% confidence interval for the difference between the actual proportions of male and female voters who favor the candidate.

d. (5points) A study has been made to compare the nicotine contents of two brands of cigarettes. Ten cigarettes of Brand A had an average nicotine content of 3.1 milligrams with a standard deviation of 0.5 milligram, while eight cigarettes of Brand B had an average nicotine content of 2.7 milligrams with a standard deviation of 0.7 milligram. Assuming that the two sets of data are independent random samples from normal populations with equal variance, construct a 95% confidence interval for the difference between the mean nicotine contents of the two brands of cigarettes.

4.

a. (5 points) Given the two random variables X and Y which have the joint density

$$f(x,y) = \begin{cases} x \cdot e^{-x(1+y)} & \text{for } x>0 \text{ and } y>0 \\ 0 & \text{elsewhere,} \end{cases}$$

find the regression equation of Y on X.

b. (10 points) If X and Y have the multinomial distribution

$$f(x,y) = \binom{n}{x,y,n-x-y} \cdot \theta_1^x \cdot \theta_2^y \cdot (1-\theta_1-\theta_2)^{n-x-y}$$

for x = 0,1,2,…,n, and y = 0,1,2,…,n, with $x+y \leqq n$, find the regression equation of Y on X.

c. (5 points) With reference to the preceding example (3.b), if we let x be the number of times an even number comes up in 30 rolls of a balanced die and Y be the number of times the result is a five, then the regression equation becomes _____.

d. (5 points) If the joint density of X_1, X_2 , and X_3 is given by

$$f(x_1, x_2, x_3) = \begin{cases} (x_1 + x_2) \cdot e^{-x_3} & \text{for } 0<x_1<1,\ 0<x_2<1,\ x_3>0 \\ 0 & \text{elsewhere} \end{cases}$$

find the regression equation of X_2 on X_1 and X_3.

e. (5 points) Let us consider the following data on the number of hours which 10 persons studied for a French test and their scores on the test:

Hours studied x	Test score y
4	31
9	58
10	65
14	73
4	37
7	44
12	60
22	91
17	84
1	21

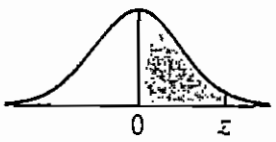
Find the equation of the least squares line that approximates the regression of the test scores on the number of hours studied.

國立雲林科技大學
96學年度碩士班入學招生考試試題

系所：財金系
科目：統計學

TABLE

Normal curve areas



z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
0.00	.0000	.0040	.0080	.0120	.0160	.0199	.0239	.0279	.0319	.0359
0.10	.0398	.0438	.0478	.0517	.0557	.0596	.0636	.0675	.0714	.0753
0.20	.0793	.0832	.0871	.0910	.0948	.0987	.1026	.1064	.1103	.1141
0.30	.1179	.1217	.1255	.1293	.1331	.1368	.1406	.1443	.1480	.1517
0.40	.1554	.1591	.1628	.1664	.1700	.1736	.1772	.1808	.1844	.1879
0.50	.1915	.1950	.1985	.2019	.2054	.2088	.2123	.2157	.2190	.2224
0.60	.2257	.2291	.2324	.2357	.2389	.2422	.2454	.2486	.2517	.2549
0.70	.2580	.2611	.2642	.2673	.2704	.2734	.2764	.2794	.2823	.2852
0.80	.2881	.2910	.2939	.2967	.2995	.3023	.3051	.3078	.3106	.3133
0.90	.3159	.3186	.3212	.3238	.3264	.3289	.3315	.3340	.3365	.3389
1.00	.3413	.3438	.3461	.3485	.3508	.3531	.3554	.3577	.3599	.3621
1.10	.3643	.3665	.3686	.3708	.3729	.3749	.3770	.3790	.3810	.3830
1.20	.3849	.3869	.3888	.3907	.3925	.3944	.3962	.3980	.3997	.4015
1.30	.4032	.4049	.4066	.4082	.4099	.4115	.4131	.4147	.4162	.4177
1.40	.4192	.4207	.4222	.4236	.4251	.4265	.4279	.4292	.4306	.4319
1.50	.4332	.4345	.4357	.4370	.4382	.4394	.4406	.4418	.4429	.4441
1.60	.4452	.4463	.4474	.4484	.4495	.4505	.4515	.4525	.4535	.4545
1.70	.4554	.4564	.4573	.4582	.4591	.4599	.4608	.4616	.4625	.4633
1.80	.4641	.4649	.4656	.4664	.4671	.4678	.4686	.4693	.4699	.4706
1.90	.4713	.4719	.4726	.4732	.4738	.4744	.4750	.4756	.4761	.4767
2.00	.4772	.4778	.4783	.4788	.4793	.4798	.4803	.4808	.4812	.4817
2.10	.4821	.4826	.4830	.4834	.4838	.4842	.4846	.4850	.4854	.4857
2.20	.4861	.4864	.4868	.4871	.4875	.4878	.4881	.4884	.4887	.4890
2.30	.4893	.4896	.4898	.4901	.4904	.4906	.4909	.4911	.4913	.4916
2.40	.4918	.4920	.4922	.4925	.4927	.4929	.4931	.4932	.4934	.4936
2.50	.4938	.4940	.4941	.4943	.4945	.4946	.4948	.4949	.4951	.4952
2.60	.4953	.4955	.4956	.4957	.4959	.4960	.4961	.4962	.4963	.4964
2.70	.4965	.4966	.4967	.4968	.4969	.4970	.4971	.4972	.4973	.4974
2.80	.4974	.4975	.4976	.4977	.4977	.4978	.4979	.4979	.4980	.4981
2.90	.4981	.4982	.4982	.4983	.4984	.4984	.4985	.4985	.4986	.4986
3.00	.4987	.4987	.4987	.4988	.4988	.4989	.4989	.4989	.4990	.4990

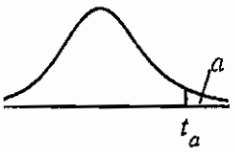
z	area
3.50	.49976737
4.00	.49996833
4.50	.49999660
5.00	.49999971

Source: Computed by P. J. Hildebrand.

國立雲林科技大學
96學年度碩士班入學招生考試試題

系所：財金系
科目：統計學

TABLE **Percentage points of the *t*-distribution**



df	$a = .1$	$a = .05$	$a = .025$	$a = .01$	$a = .005$	$a = .001$
1	3.078	6.314	12.706	31.821	63.657	318.309
2	1.886	2.920	4.303	6.965	9.925	22.327
3	1.638	2.353	3.182	4.541	5.841	10.215
4	1.533	2.132	2.776	3.747	4.604	7.173
5	1.476	2.015	2.571	3.365	4.032	5.893
6	1.440	1.943	2.447	3.143	3.707	5.208
7	1.415	1.895	2.365	2.998	3.499	4.785
8	1.397	1.860	2.306	2.896	3.355	4.501
9	1.383	1.833	2.262	2.821	3.250	4.297
10	1.372	1.812	2.228	2.764	3.169	4.144
11	1.363	1.796	2.201	2.718	3.106	4.025
12	1.356	1.782	2.179	2.681	3.055	3.930
13	1.350	1.771	2.160	2.650	3.012	3.852
14	1.345	1.761	2.145	2.624	2.977	3.787
15	1.341	1.753	2.131	2.602	2.947	3.733
16	1.337	1.746	2.120	2.583	2.921	3.686
17	1.333	1.740	2.110	2.567	2.898	3.646
18	1.330	1.734	2.101	2.552	2.878	3.610
19	1.328	1.729	2.093	2.539	2.861	3.579
20	1.325	1.725	2.086	2.528	2.845	3.552
21	1.323	1.721	2.080	2.518	2.831	3.527
22	1.321	1.717	2.074	2.508	2.819	3.505
23	1.319	1.714	2.069	2.500	2.807	3.485
24	1.318	1.711	2.064	2.492	2.797	3.467
25	1.316	1.708	2.060	2.485	2.787	3.450
26	1.315	1.706	2.056	2.479	2.779	3.435
27	1.314	1.703	2.052	2.473	2.771	3.421
28	1.313	1.701	2.048	2.467	2.763	3.408
29	1.311	1.699	2.045	2.462	2.756	3.396
30	1.310	1.697	2.042	2.457	2.750	3.385
40	1.303	1.684	2.021	2.423	2.704	3.307
60	1.296	1.671	2.000	2.390	2.660	3.232
120	1.289	1.658	1.980	2.358	2.617	3.160
240	1.285	1.651	1.970	2.342	2.596	3.125
∞	1.282	1.645	1.960	2.326	2.576	3.090

Source: Computed by P. J. Hildebrand.

TABLE

The Chi-Square Distribution*

$$\Pr(X \leq x) = \int_0^x \frac{1}{\Gamma(r/2)2^{r/2}} w^{r/2-1} e^{-w/2}\, dw$$

	Pr ($X \leq x$)					
r	0.01	0.025	0.050	0.95	0.975	0.99
1	0.000	0.001	0.004	3.84	5.02	6.63
2	0.020	0.051	0.103	5.99	7.38	9.21
3	0.115	0.216	0.352	7.81	9.35	11.3
4	0.297	0.484	0.711	9.49	11.1	13.3
5	0.554	0.831	1.15	11.1	12.8	15.1
6	0.872	1.24	1.64	12.6	14.4	16.8
7	1.24	1.69	2.17	14.1	16.0	18.5
8	1.65	2.18	2.73	15.5	17.5	20.1
9	2.09	2.70	3.33	16.9	19.0	21.7
10	2.56	3.25	3.94	18.3	20.5	23.2
11	3.05	3.82	4.57	19.7	21.9	24.7
12	3.57	4.40	5.23	21.0	23.3	26.2
13	4.11	5.01	5.89	22.4	24.7	27.7
14	4.66	5.63	6.57	23.7	26.1	29.1
15	5.23	6.26	7.26	25.0	27.5	30.6
16	5.81	6.91	7.96	26.3	28.8	32.0
17	6.41	7.56	8.67	27.6	30.2	33.4
18	7.01	8.23	9.39	28.9	31.5	34.8
19	7.63	8.91	10.1	30.1	32.9	36.2
20	8.26	9.59	10.9	31.4	34.2	37.6
21	8.90	10.3	11.6	32.7	35.5	38.9
22	9.54	11.0	12.3	33.9	36.8	40.3
23	10.2	11.7	13.1	35.2	38.1	41.6
24	10.9	12.4	13.8	36.4	39.4	43.0
25	11.5	13.1	14.6	37.7	40.6	44.3
26	12.2	13.8	15.4	38.9	41.9	45.6
27	12.9	14.6	16.2	40.1	43.2	47.0
28	13.6	15.3	16.9	41.3	44.5	48.3
29	14.3	16.0	17.7	42.6	45.7	49.6
30	15.0	16.8	18.5	43.8	47.0	50.9

* This table is abridged and adapted from "Tables of Percentage Points of the Incomplete Beta Function and of the Chi-Square Distribution," *Biometrika*, 32 (1941). It is published here with the kind permission of Professor E. S. Pearson on behalf of the author, Catherine M. Thompson, and of the Biometrika Trustees.

國立雲林科技大學
96學年度碩士班入學招生考試試題

系所：財金系
科目：財務金融實務

簡答題：

1. 今年二月二十七日由大陸上海股市所引爆的全球股災，一般經濟學者歸納為美國、日本與大陸本身三地的特殊個別因素，請就此三地的特殊個別因素予以討論(二十分)。

2. 這兩年台灣的總體經濟表現可用「外溫內冷」四個字做為終結，請解釋此四個字之意涵(五分)；以及其造成原因(五分)；今年有關當局希望改善此一內冷之窘態，可是有兩項不利的社會因素，請列舉之(十分)。

3. 中共今年三月人大通過了『物權』法案，請敘述之(十分)。

4. 美國抵押銀行協會(MORTGAGE BANKERS ASSOCIATION) 於2007年3月13日發佈報告指出，美國第4季次級抵押貸款戶逾期未繳款的比例，由第3季的12.56%增至13.33%；至於信用評等最好的貸款戶，其貸款抵押品贖取權之取消也見增加，房屋抵押貸款市場陷入全面風暴已有徵兆。這消息在美國金融市場掀起軒然大波，並為造成當日美股大跌的可能原因。

請回答下列跟此事件相關的問題:

[1] 何謂次級抵押貸款(subprime mortgage)? (10分)

[2] 有一類型的次級抵押貸款縮寫為NINAs. 何謂NINAs? (5分)

[3] 為何次級房貸的壞帳風波可能造成美股下跌? (20分)

國立雲林科技大學
96 學年度碩士班入學招生考試試題

系所：財金系
科目：財務金融實務

5. 報載今年台股股利挑戰兆元大關。統計至 3 月 26 日為止，已公布股利政策的上市櫃公司共將發出現金股息 3,061 億元，推算今年全部上市櫃公司現金股息配發將突破 8,000 億元，加計股票股利後的股利水準更將挑戰 1 兆元大關，可望雙雙創下歷史新高。其中，中華網龍（3083）3 月 23 日召開董事會，公佈 2006 年每股稅後淨利 5.58 元，去年度股利擬無償配發 4 元，包括 3.2 元現金股利、0.8 元股票股利。假設 6 月 25 日收盤價為每股 96 元，而次日 6 月 26 日為除息/權日。請回答下列相關的問題:

[1] 何謂除息/權日? (5 分)

[2] 請計算除權息參考價? (10 分)