考試時間:100分鐘 統計學研究所(風險管理組) 是否使用計算機:否

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I. True or False Questions: (20%)

- 1. When there is full employment, the decision to produce more of one good necessitates decreased production of another good.
- 2. A surplus exists when the market price is above the equilibrium price.
- 3. GDP is always greater than personal income.
- 4. Investment spending is positively related to the rate of interest, *ceteris paribus*.
- 5. Consumption and investment spending in the national income accounts is solely for domestically produced goods and services.
- 6. An equilibrium level of output exists when output is \$550 billion, investment spending is \$70 billion, net exports equal \$30 billion, and the consumption function is C=\$10 billion+0.80Y.
- 7. The availability of food stamps is an example of a discretionary fiscal action.
- 8. A monopoly leads to a higher commodity price and less output than perfect competition.
- 9. Firms borrow as long as the rate of interest is greater than the marginal productivity of the investment.
- 10. Perfect competition leads to the most efficient allocation of resources and maximum social welfare.
- II. Multiple Choice Questions: select the "best" choice among a set of options. (30%)
- 11. The word *economic* refers to something that
 - (a) is scarce,
 - (b) is limited,
 - (c) commands a price,
 - (d) all of the above.
- 12. In economics the term *opportunity cost* refers to
 - (a) the monetary cost of a good or service,
 - (b) the money cost of hiring an economic resource,
 - (c) the value of a good or service forgone,
 - (d) the money cost of providing a good or service.
- 13. A supply schedule shows the relationship between the quantity supplied over a given period of time and
 - (a) factor prices,

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- (b) the price of the commodity,
- (c) technology,
- (d) the prices of other commodities related in production.
- 14. Which of the following statements is *not* true when price is above the equilibrium price?
 - (a) There is a shortage of the commodity.
 - (b) The quantity supplied exceeds the quantity demanded of the commodity.
 - (c) The pressure on the commodity price is downward.
 - (d) There is a surplus of the commodity.
- 15. Frictional unemployment exists when
 - (a) there is a fall in aggregate demand,
 - (b) workers are seasonally unemployed,
 - (c) workers lack the skills necessary to be employed,
 - (d) potential GDP exceeds real GDP.
- 16. Unanticipated inflation is harmful to
 - (a) retirees whose retirement income is indexed,
 - (b) debtors,
 - (c) creditors,
 - (d) economic growth but has no effect upon individual members of the economy.
- 17. A discretionary fiscal action involves
 - (a) automatic changes in net tax revenues that result from the income tax structure,
 - (b) payment of unemployment insurance,
 - (c) a Congressionally mandated change in the level of government spending or net tax revenues,
 - (d) payment of social security to retired individuals.
- 18. A bank's net worth is \$2000 when it has
 - (a) reserves of \$1000, check-writing deposits of \$10,000, loans of \$19,000, and savings deposits of \$8000,
 - (b) reserves of \$1000, check-writing deposits of \$10,000, loans of \$19,000, and savings deposits of \$12,000,
 - (c) reserves of \$4000, check-writing deposits of \$10,000, loans of \$19,000, and savings

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deposits of \$8000,

- (d) reserves of \$1000, check-writing deposits of \$10,000, loans of \$16,000, and savings deposits of \$8000.
- 19. Which of the following financial assets is not included in the M2 money supply?
 - (a) Savings deposits,
 - (b) Large-denomination CDs,
 - (c) Check-writing deposits,
 - (d) Overnight repurchase agreements (RPs).
- 20. Which statement is false?
 - (a) Many Keynesians are politically liberal.
 - (b) Monetarists advocate policies which interfere least with the market.
 - (c) Monetarists contend that increased government spending has no crowding-out effect.
 - (d) Keynesians contend that an increase in the money supply has an unpredictable effect upon nominal GDP.

III. Solve Problems

1. Table 1 presents the supply schedules of the three producers of potatoes for a market area.

Table 1

	Quantity Supplied	Quantity Supplied	Quantity Supplied
Price	by Producer 1, q ₁	by Producer 2, q ₂	by Producer 3, q ₃
(\$ per bu)	(bu per month)	(bu per month)	(bu per month)
5	37.5	22.5	17.5
4	35.0	20.0	15.0
3	30.0	15.0	10.0
2	20.0	10.0	5.0
1	5.0	2.5	0.0

- (a). Derive a market supply schedule for potatoes.
- (b). Plot this market supply schedule and label the curve S. (10%)
- 2. Suppose the market demand for Good X is given by the equation $Q_d = 1000 20P$, and market supply is given by the equation $Q_s = 500 + 30P$.
 - (a). Find quantity demanded and quantity supplied when the price of Good X is \$12. Is there a surplus or shortage in the production of Good X? What should happen to the price of

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Good X?

(b). Find the equilibrium price for Good X by equating Q_d and Q_s .

(c). Prove that the price found in part (b) is an equilibrium price. (10%)

- 3. Potential GDP, real GDP, and the GDP gap are presented in Table 2 for a hypothetical economy for period 1:1 (year 1, quarter 1) through period 3:4.
 - (a). Is this economy ever on its production-possibility frontier?
 - (b). What is happening to labor's unemployment rate between periods 1:1 and 1:4? Between periods 3:1 and 3:4?
 - (c). What is happening to the price level between periods 2:1 and 2:4? (10%)

Table 2

Period	Potential GDP	Real GDP	GDP Gap
1:1	408.0	395.6	9.4
1:2	412.1	403.7	8.4
1:3	416.2	412.0	4.2
1:4	420.4	420.0	0.4
2:1	424.6	424.6	0.0
2:2	428.8	430.0	-1.2
2:3	433.1	436.1	-3.0
2:4	437.5	440.5	-3.0
3:1	441.8	440.5	1.3
3:2	446.2	436.1	10.1
3:3	450.7	433.9	16.8
3:4	455.2	433.4	21.8

- 4. The price level.
 - (a). Suppose the price of Good A is \$11, \$11.55, \$12.24, \$13.46, and \$14.14 in years 1 through 5, respectively. Construct a price index for Good A using year 1 as the reference (base) year.
 - (b). What has happened to the price of Good A between year 1 and year 5?
 - (c). What is the annual percentage change in the price of Good A? (10%)
- 5. A Keynesian aggregate supply curve is depicted in the following figure with full-employment output denoted by y^* .
 - (a). Find equilibrium output when aggregate demand curve AD_1 intersects the aggregate

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supply curve at point A. Is there a recessionary or inflationary gap?

(b). Find equilibrium output when the aggregate demand curve is AD₂. What has happened to the price level? Is there a recessionary or inflationary gap? (10%)

