1. Define the following terms: (40%)
   a. law of diminishing returns
   b. marginal revenue product
   c. economy of scale
   d. full employment
   e. inflationary gap
   f. frictional unemployment
   g. multiplier effect
   h. liquidity
   i. price discrimination
   j. quantity supplied

2. multiple choice (20%)
   a. Monopolists: (A) maximize revenue, not profits (B) have no short run fixed costs (C) have no supply curve (D) are price takers
   b. The long-run equilibrium price level in monopolistic competition is usually higher than that in perfect competitive markets. It is mainly due to: (A) product differentiation (B) smaller number of producers (C) smaller market size (D) interaction between competitors
   c. A production isoquant identifies: (A) the maximum output possible given fixed budget (B) the different combinations of goods that can be produced, given fixed amounts of inputs (C) the different combinations of inputs that can be used to produce a fixed level of output (D) none of the above
   d. Economic profits: (A) are larger than or equal to accounting profits (B) are smaller than or equal to accounting profits (C) are equal to accounting profits (D) all of the above are possible (E) none of the above
   e. A firm will shut down in the short run if: (A) suffering a loss, (B) fixed costs exceed revenues, (C) variable costs exceed revenues, (D) its total costs exceed revenues, (E) all of the above
   f. Firms will continue to hire labor as long as: (A) marginal revenue product is less than the wage rate (B) marginal revenue product is equal to marginal product of a labor (C) marginal product of a labor is higher than the wage rate (D) workers keep supplying labor
   g. The MPS is 0.1 and there are not imports or income taxes. Investment decreases by $100 million and the price level is constant. Real GDP: (A) decreases by $10 million (B) increases by $90 million (C) decreases by $1 billion (D) increases by $1 billion

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h. Generally speaking, when a master (男主人) marries a housekeeper (女管家),
the GNP will: (A) increase (B) decrease (C) remain constant (D) remain uncertain

i. Which one of the following goods can be used as money? (A) diamonds (B) bananas (C) baseball season tickets (D) stamps

j. Personal income taxes are examples of: (A) monetary policy instruments (B) fiscal policy instruments (C) trade policy instruments (D) none of the above

3. You are given the following information about the economy of Taiwan:
Autonomous consumption expenditure is $100 billion, the marginal propensity to consume is 0.8, investment is $560 billion, government purchases of goods and services are $400 billion and the net taxes are a constant $400 billion.

a. What is the consumption function?
b. What is the equation that describes the aggregate expenditure?
c. Calculate equilibrium income.
d. If investment falls to $360 billion, what is the change in equilibrium income and what is the size of the multiplier? (20%)

4. A technological breakthrough reduces the cost of producing computer chips.
Using supply-and-demand diagrams, show the effect of this breakthrough on the equilibrium price and quantity in the following markets.
a. the market for computers.
b. The market for computer software. (10%)

5. The following consumption and investment functions belong to an unknown country located in the middle of Africa.
C=400+0.6Y, I=200

(1) What is its saving function?

(2) Plotting its equilibrium output by using of planned expenditure equal to income.

(3) Plotting its equilibrium output by using of planned investment equal to saving. (10%)