請按題目順序作答，若無法作答者，請填寫題號後空白，

一、(30%) Let y_t denote the (log) real per capita GDP and assume the economy is given by :

$$y_{t+1} = \gamma + y_t + e_{t+1}$$

where e_{t+1} is a random variable, representing an unforecastable "shock" to the economy's GDP.

(1) (10%) What is the expected rate of growth of (log) GDP?

(2) (10%) What is the expected value of y_{t+N}, given what we know at date t ?

(3) (10%) What is the economic meaning of your answer for (2)?

二、(40%) Please answer the following questions:

(1) (10%) What is the Taylor rule?

(2) (10%) What is the Taylor principle?

(3) (10%) What is the Okun's law?

(4) (10%) What is the "secular stagnation"?

注意：背面有試題

三、(30%) Assume that c_t is the period-t consumption of a consumer who was born in year t, so such a consumer would be young in period t. Similarly, c_{t+1} is the consumption of the same consumer in period t + 1, when he is old. The consumers do not care about leisure. A consumer born in year t has the following utility function:

$$u(c_t^t, c_{t+1}^t) = \ln(c_t^t) + \ln(c_{t+1}^t)$$

In each period the young person supplies one unit of labor and receives

wage income w_t. The labor supply is fixed, since consumers do not care about leisure. The wage income can be used as savings k_t and as consumption c_t. In period t+1 the consumer born in t is old and retired. The old consumer lends his savings k_t to the firm. The firm uses the savings as capital and pays return r_{t+1} to the old consumer. A fraction δ of the capital wears out while being used for production and is not returned to the consumer.

(1)(20%) What is the utility maximization problem for the household born in period t.

(2)(10%) What is the optimum savings?

注意：背面有試題