Student Number ....

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EE312 Macroeconomics, 2/2015 (Sec. 046402)
Problem Sets 2 : Ch.3 A Closed Economy One-Period Macroeconomic Model

Please submit at the BE office, 5th floor department of Economics building.
Deadline of submission : February 18, 2016, before 15.00 hrs.
Late submission will not be accepted.
*** Exam will consist of essay-type questions only.**

1. In a closed economy one-period model we have been studying, consumption (C) is .... (an exogenous variable, an endogenous variable) and total time avaialbe (h) is .... (an exogenous variable, an endogenous variable)

2. A good is normal to consumer if ....

3. A good is inferior to consumer if ....

4. Time-constaint for the consumer is expressed as $\ell =$ ....,

   where h = total time available , ℓ= leisure time, N^S = time spent working

5. The real wage denotes ....

   (Hint: choose one from the following choices: (i) the number of units of consumption goods that can be exchanged for one unit of labour time, (ii) the number of units of labour time that can be exchanged for one unit of consumption goods, (iii) the number of units of labour time that can be exchanged for one unit of leisure time, (iv) the number of units of leisure time that can be exchanged for one unit of labour time)

6. The budget constraint of the consumer is expressed as

   C = ...

   $C + w\ell$ = ...

   (a) With consumption on the vertical axis and leisure on the horizontal axis, the slope of the budget line is equal to ....

   (b) The vertical intercept of the budget line is equal to ....

   (c) How does an increase in the taxes affect the budget constraint? ....

   (Hint: choose one from the following choices: (i) a paralell move down,(ii) a paralell move up, (iii) a tilting to the left, (iv) a tilting to the right)

   (d) The household budget constraint may have a kink because ....

   (e) At the optimal consumption bundle, the marginal rate of substitution of labour for consumption ($MRS_{\ell,C}$) is equal to ....

(f) How does an increase in real dividend income minus taxes ($\pi - T$) affect consumption and leisure? Graphically illustrate. Explain.

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an increase in real dividend income minus taxes ($\pi - T$) represents ....

(Hint- choose one from the following choices: (i) a pure income effect ,(ii) a substitution effect, (iii) a combination of income effect and substitution effect)

(This case is exactly the same as one we discussed in the class. You may copy the graph from the lecture slides. However, I suggest you to practice drawing it by yourself. It is very likely that you need to draw a graph in the exam. Make sure you understand all the graphes well and make sure you can make an analysis on it - think about the other cases.)

(g) The substitution effect measures .... (Hint- choose from the following choices: (i) the response of quantities to changes in the relative price of goods (ii) the responses of relative price to changes in the demand for goods (iii) how two goods can be used for the same purpose (iv) the reponse of quantities to the changes in the relative quantities of two goods)

(h) When the real wage increases, the substitution effect in the consumer's choices leads to .... (an increase or a decrease) in consumption and .... (an increase or a decrease) in leisure.

(i) When the real wage increases, the income effect in the consumer's choices leads to .... (an increase or a decrease) in consumption and .... (an increase or a decrease) in leisure.

(j) The labor supply is increasing in the wage because the substitution effect is .... (larger than, smaller than, equal to) the income effect.

(k) Suppose the substitution effect is larger than the income effect. How does an increase in the real wage affect consumption and labour supply? Graphically illustrate. Explain.

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an increase in real wage (w) represents ....

(Hint- choose one from the following choices: (i) a pure income effect ,(ii) a substitution effect, (iii) a combination of income effect and substitution effect)

(This case is exactly the same as one we discussed in the class. You may copy the graph from the lecture slides. However, I suggest you to practice drawing it by yourself. It is very likely that you need to draw a graph in the exam. Make sure you understand all the graphes well and make sure you can make an analysis on it - think about the other cases.)

7. Marginal product of a factor of production is equal to..

   (Hint- choose one from the following choices: (i) the ratio of the amount of that factor of production to the amount of output produced ,(ii) the amount of additional outputs that can be produced with one additional unit of all inputs, (iii) the amount of additional outputs that can be produced with one additional unit of that factor input, holding constant the quantities of other inputs)

8. Contant return to scale means that for any constant $x > 0$, xY..... $(>, <, =, \neq)$ $zF(xN^s, xK)$, where $Y = zF(N^s, K)$.

9. As the quantities of labour input increases, the marginal product of labour (MP_N) .... (decreases, increases). Hence, a production function is .... (concave, convex) in labour.

10. The profit maximising quantity of labour equates the marginal product of labour with ....

11. Suppose the representative firm suddenly has less capital. What will happen to the production function and labour demand? Graphically illustrate.

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