

1) Multiple choice questions. Mark only one answer (a wrong answer will be graded negatively)

i) Consider $Y = f(L; K^*)$, where Y is the product of the company, L is labor input (variable and homogeneous) and K^* is the fixed capital factor, then the law of diminishing returns implies that:

- a) The quality of L declines when hiring more workers.
- b) Beyond a certain point, the K is abundant and less productive.
- c) The maximum total output will be achieved in Zone III.
- d) None of the options is correct.

ii) Given the same production function as in (i), the competitive firm always seeks to operate in the "production zone" (or zone II), since:

- a) When moving to zone II, increases in L (with K fixed) inevitably contribute to increase the efficiency of either the L or K.
- b) In this zone the firm maximizes output, and this is its ultimate goal.
- c) The average product is still positive.
- d) None of the options is correct.

iii) The profit-maximizing firm will seek to expand its output by 1 unit, and therefore the amount of work required to do so, provided that:

- a) The marginal wage cost is less than the marginal revenue.
- b) The marginal wage cost is greater than the marginal revenue.
- c) Income and marginal cost are equal.
- d) None of the options is correct.

iv) In considering the cases of "workaholic" and "leisure-lover" we have:

- a) The indifference curves of the former are steeper than those of latter.
- b) The former is willing to sacrifice an additional unit of leisure for a large amount of income, while the second does so in exchange for a small amount.
- c) The marginal rate of substitution for the former is lower than that for the latter, along the indifference curves.
- d) None of the options is correct.

v) The net effect on labor force participation, as a result of the cyclical changes in the economy, is determined by:

- a) The productivity of workers.
- b) The additional worker effect and discouraged worker effect.
- c) The extent of the law of one wage during those times.
- d) None of the options is correct.

vi) Which of the following statements corresponds to Becker's model?

- a) Individuals may use their time in leisure and work, nothing more.
- b) Families can use their time in leisure and work, nothing more.
- c) Families produce "commodities" by using their leisure time or by working.
- d) Families produce "commodities" without entering the labor market, then they exchange them with the "commodities" produced by other families.

2) Calculate the elasticity of the supply of labor for the following individuals, and state whether they are elastic, inelastic, or unit-elastic.

- a) $\Delta\%L = -6\%$, $\Delta\%W = -5\%$ is _____
- b) $L_0 = 20$, $W_0 = 4 \rightarrow$ initial scenario
 $L_1 = 30$, $W_1 = 6 \rightarrow$ final scenario is _____
- c) $L_0 = 60$, $W_0 = 8 \rightarrow$ initial scenario
 $L_1 = 40$, $W_1 = 9 \rightarrow$ final scenario is _____

Further, interpret the result in c):
