



**ECO2114A**  
**First mid-term examination**

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You may not consult with any written documents whatsoever, and no conversation is permitted while the examination is in progress. It is forbidden to look at other students' papers. There are 25 multiple choice questions and 25 points worth of short answer questions. For the multiple choice questions, it may not necessarily be the case that four of the responses are totally wrong, and one of them is unambiguously correct. In such situations, select the best answer. Respond to the multiple choice questions on the scan-tron sheet. Please grid in your name and your student number by filling in the appropriate ovals in each column. You must grid in the ovals below each digit of your student number, and below each letter of your name. Respond to the written questions in the examination booklet. Hand in both the scan-tron sheet and your examination booklet, but you may retain the questionnaire.

Part A: Multiple choice questions

1. According to the institutional approach to labour economics, how are prevailing wages typically determined?
- a) By supply and demand forces
  - b) By comparison with wages paid to similar workers elsewhere in the economy or with historical norms
  - c) By descriptive realism
  - d) By utility-maximizing and profit-maximizing behaviour

B

2. Which of the following statements regarding the neo-classical approach to labour economics is true?
- a) All actors, whether they are firms or workers, make their choices free from coercion.
  - b) The equilibrium outcome represents an equitable allocation of labour at an equitable wage.
  - c) The equilibrium outcome is determined primarily by conventions and institutional forces

d) Certain entities or groups, such as labour unions or corporations, can fix the outcome so that it is tilted in their favour.

A

3. The following four statements are made by a worker named Ashley. Which one is most consistent with a substitution effect?

- a) "Because of all of the overtime pay that I received while working last Spring, I decided to take the summer off of work."
- b) "After I received that small inheritance, I decided to cut my work hours."
- c) "I turned down that job offer because I do not feel like working at that meagrely wage level"
- d) "Since I receive premium pay over the next few days, I plan to work longer hours than usual."

D

4. Which of the following statements concerning the elasticity of labour supply is false?

- a) Empirical estimates tend to point to an inelastic value for the wage elasticity of supply.
- b) It is generally higher for men than for women.
- c) The income-compensated elasticity tends to be higher in magnitude (i.e. absolute value) than the uncompensated, gross elasticity.
- d) It typically is positive in value.

B

5. Which of the following statements regarding the phenomena of discouraged workers and added workers is true?

- a) In periods of high unemployment, discouraged workers tend to withdraw from the labour force.
- b) In periods of low unemployment, added workers tend to re-enter the labour force
- c) In periods of high unemployment, added workers (particularly married women) tend to withdraw from the labour force
- d) Discouraged workers are accounted for in the official unemployment rate.

A

6. The following four statements are made by a worker named Evan. Which one is most consistent with the reservation wage?

- a) "Because of all of the overtime pay that I received while working last Spring, I decided to take the summer off of work."

- b) "On the margin, I am indifferent between working another hour or taking that hour off and going about my chores"
- c) "I was going to quit my job, but when the boss offered me a pay raise, I changed my mind"
- d) "Since I receive premium pay over the next few days, I plan to work longer hours than usual."

C

7. All of the following are basic ingredients (or building blocks) in the derivation of labour supply choices except:

- a) the worker's preferences for income versus leisure
- b) the equilibrium condition for the number of hours that will be worked
- c) the worker's amount of non-labour-market income
- d) the going wage rate

B

8. In the neo-classical model of labour supply, which of the following is always true?

- a) A wage increase always causes an increase in hours worked.
- b) If there is an income effect, it must stem from a change in the wage.
- c) The income effect and the substitution effect stemming from a wage change work in opposing directions
- d) The substitution effect causes the worker to work more hours if wages decrease

C

9. Over the backward-bending portion of the labour supply curve, which one of the following statements is true?

- a) The substitution effect of a wage change dominates the income effect
- b) Leisure becomes an inferior good
- c) The wage elasticity of labour supply turns from inelastic to elastic
- d) The wage elasticity of labour supply is negative

D

10. For a worker who is deciding how many hours of labour to supply (at the intensive margin), which of the following statements is false?

- a) This worker cannot do better for himself/herself by working either longer or shorter hours.
- b) The rate at which she is willing to exchange leisure for income equals the rate at which the market allows her to do it.
- c) The marginal rate of substitution of leisure for income is equal to the wage rate.

d) The marginal utility of income is equal to the marginal utility of leisure.

D

11. The measured, official unemployment rate in the USA is significantly lower than it is in Canada, despite the fact that a greater proportion on working-age adults are actually working in Canada compared to the United States. What explains this apparent inconsistency? I posted a brief discussion of this on the courseweb.

a) Wages in Canada are unduly high.

b) The data generated by Statistics Canada in the Labour Force Survey are often unreliable

c) Canada has a lower labour force participation rate

d) A significant number of those who are jobless are considered to be unemployed in Canada, whereas their counterparts in the USA are considered to be out of the labour force.

D

12. Which of the following countries tends to have the highest labour force participation rates?

a) Continental European countries

b) Canada, Australia, and the United Kingdom

c) The United States

d) There is no enduring ranking, as in some years one country will have higher rates, but in other years another country's rates will surpass them

B

13. Consider the following figures from the September 2017 Labour Force Survey, which are 'hot off the internet'. Working-age population, 30 million; labour force, 19.7 million; employment, 18.6 million; unemployment, 1.2 million. The equation for the unemployment rate (UR) is:

a)  $UR = 19.7 / 1.2$

b)  $UR = 1.2 / 30$

c)  $UR = 1.2 / 19.7$

d)  $UR = 1.2 / 18.6$

C

14. What is the economic significance of a demogrant?

a) It will put the recipient on the backward bending portion of his/her labour supply curve.

- b) Payment of a demogrant does not have an impact on work incentives.
- c) It will have the same effect on work incentives as a tax cut applied to the wage rate.
- d) There is no substitution effect if the worker is granted one.

D

15. As I have mentioned in class, social activists and other 'left-wing' folk frequently claim that in regards to social insurance payments, "incentives do not matter". Within the framework of the labour supply model, this implies that:

- a) the marginal utility of leisure is high
- b) the marginal utility of leisure is zero
- c) the marginal utility of income is zero
- d) income effects are very strong

B

16. Suppose that according to a recent employment report, many new jobs were created, but the unemployment rate did not fall. How could this occur?

- a) The ratio of the unemployed to the sum of the unemployed and the employed increased.
- b) The employment rate rose.
- c) The labour force participation rate rose.
- d) These two events cannot occur at the same time.

C

17. Which of the following programs is thought to be superior in terms of its ability to direct payments to those individuals or families in greatest need of assistance?

- a) Social assistance or welfare
- b) Unemployment insurance
- c) A guaranteed annual income benefit
- d) the Canada Pension Plan

A

18. Which of the following indicators of the health of the labour market has primarily a supply side interpretation?

- a) The average wage level.
- b) The labour force participation rate.
- c) The employment to population ratio.
- d) The unemployment rate

B

19. Which of the following items did I associate with a NON scientific approach to analyzing labour market phenomena?

- a) a dispassionate approach
- b) analysis by anecdote
- c) only making refutable hypotheses
- d) empirical validation of hypotheses

B

20. Which of the following statements concerning social assistance programs is true?

- a) The implicit tax rate applied to welfare benefits is low and therefore of little consequence.
- b) Research has shown that recipients and would-be recipients do not respond to changes in the benefit level.
- c) The negative income tax program gives more incentives to work than a situation of a labour market with no welfare program at all.
- d) The negative income tax program gives more incentives to work than does the social assistance program as it is currently structured.

D

21. As I said in class, economically conservative politicians perpetually support cuts in tax rates applied to labour market income, and they claim that the government will actually GAIN revenue (which has been disproved). What kind of labour supply behaviour would that involve?

- a) an inelastic supply of labour with a strong income effect
- b) an inelastic supply of labour with a strong substitution effect
- c) an elastic supply of labour with a strong substitution effect
- d) an elastic supply of labour with a strong income effect

C

22. The average hourly wage for Canadian workers is approximately:

- a) \$ 25 per hour
- b) \$ 30 per hour
- c) \$ 20 per hour
- d) none of the above

A

23. The approximate value for the labour-force participation rate in Canada is:

- a) 66 %
- b) 76 %
- c) 57 %
- d) 80 %

A

24. I briefly went over the circular flow model. Which of the following statements is false?

- a) The labour market fits into the input or factor market.
- b) In the input markets, it is the households who receive the income and the firms that do the spending.
- c) In the input markets, it is the firms who receive the income and the households that do the spending.
- d) In the aggregate, spending must be equal to income

C

25. I have said a number of times that two labour market phenomena that have occurred over the past 25 years or so are a widening distribution of labour market earnings (i.e. a higher degree of inequality) and a decline in the share of aggregate income that is paid to labour. Which of the following are thought to be among the primary causes?

- a) Union busting and legislation that is anti-worker
- b) Technological change and globalization
- c) Unfavourable labour market conditions caused by recessions and their aftermath
- d) Government spending cuts that disproportionately hurt low-income workers

B

## II Short Answer Questions

Answer all of the questions below in an exam booklet using complete sentences. Point form is not acceptable.

1. Consider two points on the positively-sloped portion of the labour supply curve: (60, \$ 10) and (80, \$ 12). The abscissa gives the number of hours worked per week, while the ordinate gives the hourly wage. (5 points)
  - a. Calculate the wage-elasticity of supply based on the average wage and the average quantity supplied of labour. Explain your work.

**WES = % change Qs / % wage =  $[(80 - 60) / 70] / [(\$ 12 - \$ 10) / \$ 11] = (20 / 70) / (2 / 11) = 1.57$  where 70 is the average value of Qs and \$ 11 is the average price.**

b. Give the exact interpretation in words (and not in mathematical symbols)

**A 1 % increase (decrease) in the wage corresponds to a 1.57 % increase (decrease) in the Qs of labour.**

c. Is it elastic or inelastic? Explain your answer and give its economic interpretation.

**It is elastic because its value exceeds 1.0. The interpretation is that workers are fairly responsive to wage increases.**

2. Explain in words how the supply of labour is derived. Your discussion should start from ground-zero (Hint: these means the assumptions), and include the equilibrium condition. (5 points)

**To derive the labour supply curve means to explain from where it comes. What are the foundations? We commence with a greedy worker who seeks to maximize his/her utility. Utility is an increasing function of the level of income received and the amount of leisure taken. This utility function contains the worker's preferences for income and leisure. Given the inevitable economic phenomenon of scarcity, the worker faces a budget constraint, and is forced to trade off leisure and income on the labour market. We also assume that the workers' preferences for leisure and income are convex, which is (more or less) equivalent to the assumption of diminishing marginal utility. The equilibrium condition is the marginal rate of substitution for income for leisure (MRS) is equal to the market wage, which the worker does not control. At this point, the rate at which the worker can trade income for leisure on the labour market is equal to the rate at which he/she prefers to do so. Given any possible values of the wage, the worker sets that wage level equal to the MRS, and figures out how many hours of work (and hence how many hours of leisure) are consistent with that value of the MRS. Recall that for labour supply (or the supply of anything), the procedure is to name a wage level to the worker, and determine the corresponding number of hours of labour that will be supplied.**

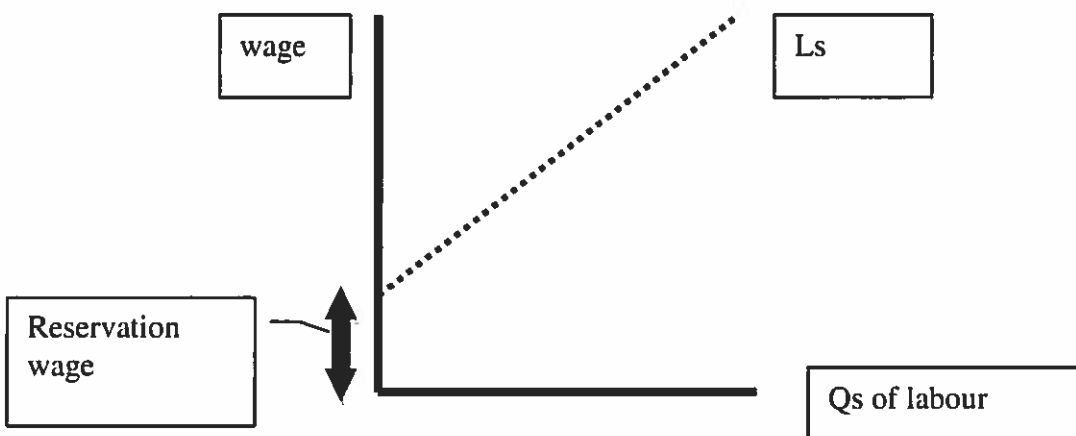
You did not have to write all of this in order to receive full credit.

3. This question deals with the topic of the reservation wage.

a. Explain why the reservation wage for any worker is equal to his/her marginal rate of substitution between leisure for income at the point of no work. (3 points)

At the point of no work,  $h$  (the number of hours of work) = 0, and the marginal rate of substitution  $MRS > \text{wage}$ . Now start to raise the wage offer. As soon as  $MRS = \text{wage}$ , on the margin, the worker is indifferent between working that first hour (and so  $h = 1 > 0$ ) and not working that first hour (and so  $h = 0$ , but barely). That is the essence of the meaning of the reservation wage: the point of indifference between working and not working. If the wage is raised by \$ 0.01, then  $h > 0$  for sure. If the wage is lowered by \$ 0.01, then  $h = 0$  for sure.

- b. Draw a rough sketch of the labour supply curve and show the reservation wage ( 2 points)



Consider the situation of a worker who is participating in the labour market, and is thus at his/her intensive margin. Suppose that at the current number of hours that are being worked, the marginal rate of substitution of leisure for income is greater than the going market wage. This is a disequilibrium situation. Explain step by step how this worker will reach his/her optimal labour supply choice, which will be an interior solution. I strongly hinted to you that this question might appear on the examination, and here it is. (4 points)

We are told that the  $MRS > \text{wage}$ , and that the worker is working a positive number of hours. This means that he/she cannot be in equilibrium, and that we expect an adjustment to occur. Remember that the worker cannot control the wage (although all workers would love to have that power). The only change that the worker can make is the number of hours that he/she chooses to work. Since the wage is less than the  $MRS$ , it means that the wage rate is lower than the worker's valuation of leisure (he/she values the hour's worth of income less than the hour of leisure given the price of leisure, which is the hourly wage), so he/she will work shorter hours. Recall that  $MRS = MU \text{ of leisure} / MU \text{ of income}$ . As the number of hours worked falls, the numerator decreases due to the law of diminishing marginal utility for leisure, while the denominator increases as income received decreases due to the law of diminishing marginal utility for income. The ratio  $MRS$  will fall, and equality will be restored, thus giving us equilibrium.

4. Explain the major differences between the dominant neo-classical paradigm of the labour market and the institutionalist approach to analyzing the labour market. In other words, what are the salient features that set them apart? What is the significance of the existence of different paradigms? In other words, why did I spend time in class presenting them? Since this question was on the sample exam that I posted, as well as a suggested solution, I expect fairly strong answers. (6 points)

**According to the former, dominant paradigm, almost all labour market players, be they workers on the supply side or firms on the demand side, make economic choices based on their own free will. Some are well-endowed, while others are not, but they are not coerced when they make their choices. They are all greedy and seek to optimize (either utility functions or profit functions), but of course they all face constraints due to scarcity. Both sides of the market have a very atomistic structure, which means that neither a group of workers nor a group of firms can influence the market outcomes. The fix is not in. The underlying ideology is that market forces generally lead to higher levels of well-being. The methodology consists of analytical models such as supply and demand that are thought to be applicable to many but not all situations. It is not quite like 'one model fits all' situations, but there is an overarching conceptual framework that is thought to be able to explain many of the labour market outcomes that we observe. Adherents to this paradigm also tend to use quantitative analysis to support assertions.**

**According to the latter paradigm, labour market outcomes are determined by a relatively small set of entities, such as labour unions, large corporations, and governments – not by individual workers and firms. Almost any individual player is coerced. These outcomes are shaped by social mores, customs, conventions and institutions, as opposed to supply and demand forces. The forces of history, both sociological and political in nature, are thought to be more important than the forces of supply and demand. The underlying ideology is that market forces do not generally lead to higher levels of well-being. The methodology consists of descriptive realism, which means that almost every single case merits its own detailed study whose findings cannot be applied to many other situations. One model does not fit all – one model is specific to only one firm, one occupation, one narrow labour market, etc.**

**The significance is that two researchers can analyse the exact same labour market outcome using the same information and data, and arrive at radically different conclusions depending on the paradigm in which they conduct their analysis. The underlying values and ideology circumscribe the analytical approach.**

You did not have to write all of these points in order to receive full credit. Many of you confused the methodology with the conceptual approach. Methodology refers to the techniques by which the researcher seeks to support his/her assertions. How does he/she make their case? The conceptual approach refers to the way and the system for thinking about the phenomenon that is the focus of the analysis.



