In addition to the multiple choice questions and additional questions below, do review questions 1-6 and problems 1 at the end of the chapter.

Multiple choice questions.

1. Since 1950, average hours worked per week have ________ for workers who never attended college and ________ for most college graduates.
   A) fallen; barely changed
   B) fallen; risen
   C) barely changed; barely changed
   D) barely changed; risen

2. A person who receives time-and-a-half overtime for working more than 8 hours per day will have a ________ which is ________ beyond 8 hours of labor.
   A) budget constraint; flatter
   B) indifference curve; flatter
   C) budget constraint; steeper
   D) indifference curve; steeper

3. If leisure is a normal good then an increase in non-labor income will cause desired hours of work to
   A) increase.
   B) decrease.
   C) stay the same.
   D) either decrease or increase.

4. Through the substitution effect, a decrease in the wage rate will cause ________ in the quantity of leisure desired.
   A) an increase
   B) a decrease
   C) no change
   D) an ambiguous change

5. If income is held constant and the wage rate increases, the desired hours of work will
   A) increase.
   B) decrease.
   C) stay the same.
   D) change ambiguously.
6. A wage increase creates a substitution effect which leads the worker to desire ________ leisure, and an income effect which leads the worker to desire ________ leisure.
   A) more; less
   B) less; more
   C) less; less
   D) more; more

7. An increase in the marginal tax rate will cause
   A) a pure income effect.
   B) a pure substitution effect.
   C) both an income and a substitution effect.
   D) neither an income nor a substitution effect.

8. An increase in nonlabor income due to a rise in the value of stocks and bonds will cause
   A) a pure income effect.
   B) a pure substitution effect.
   C) both an income and a substitution effect.
   D) neither an income nor a substitution effect.

9. If Alice's wage increases from $6.00 per hour to $6.50 per hour, then
   A) she will want to work more hours than before her raise.
   B) she will want to work fewer hours than before her raise.
   C) she will want to work the same number of hours as before her raise.
   D) she may want to work more, fewer, or the same number of hours as before her raise.

10. If Gene receives a raise in his hourly wage and decides he would like to increase his hours of work, we know that
    A) his income effect is greater than his substitution effect.
    B) his substitution effect is greater than his income effect.
    C) his income and substitution effects are equal.
    D) his income and substitution effects reinforce each other.

11. Indifference curves drawn with leisure and income on the axes have negative slopes
    A) because people are willing to give up income to obtain more leisure and vice versa.
    B) if a person likes leisure more than income.
    C) because they cannot cross one another.
    D) unless one of the goods is inferior.
12. On the portion of a worker's labor supply curve that is backward-bending,
   A) the substitution effect outweighs the income effect.
   B) the income effect outweighs the substitution effect.
   C) the income effect is negative.
   D) the substitution effect is negative.

13. If a worker's desired hours of labor do not change after a decrease in his wage rate, then
   A) his income effect dominates his substitution effect.
   B) his substitution effect dominates his income effect.
   C) his income and substitution effects are of equal magnitude.
   D) his income and substitution effects are small in absolute value.

14. The Earned Income Tax Credit will probably ________ the labor force participation of low-wage workers and ________ the labor market hours of those earning between $6,680 and $26,494.
    A) increase; decrease
    B) increase; increase
    C) decrease; increase
    D) decrease; decrease

15. A decrease in the implicit tax rate on welfare benefits serves as
    A) an incentive to work fewer hours.
    B) an incentive to work more hours.
    C) a way to decrease the incomes of welfare recipients.
    D) a way to decrease spending on benefits.

16. An Earned Income Tax Credit will
    A) increase the reservation wage of low-wage workers.
    B) increase the wage rate of some low-wage workers to a rate which is above the reservation wage.
    C) create only an income effect.
    D) create only a substitution effect.

17. Empirical studies using cross-sectional data suggest that the responsiveness of married working women's hours to wage changes is ________ than for men and that they are ________ to enter or leave the labor force due to changes in their wages.
    A) no different; more likely
    B) no different; less likely
    C) greater; more likely
    D) greater; less likely
18. Empirical estimates show that for men
   A) the income effect is greater than the substitution effect.
   B) the substitution effect is greater than the income effect.
   C) the income and substitution effects are both large so that wage changes have no effect on hours.
   D) the income and substitution effects are both small so that wage changes have no effect on hours.

19. A person with _______ indifference curves is most likely to decide not to participate in the labor force.
   A) flat
   B) steep
   C) straight
   D) upward-sloping

20. Fixed monetary costs of working will cause _______ the number of people choosing to work zero hours.
   A) an increase in
   B) a decrease in
   C) no change in
   D) an ambiguous change in

21. Fixed costs of working act like
   A) a pure substitution effect.
   B) a pure income effect.
   C) a combination of both a substitution and an income effect.
   D) neither a substitution nor an income effect.

22. A subsidy to pay for a portion of childcare costs will cause women who are participating in the labor force to work _______ hours.
   A) more
   B) fewer
   C) the same number of
   D) at least as many

23. A subsidy to pay for a portion of child care costs will cause labor force participation rates to
   A) remain unchanged.
   B) change ambiguously.
   C) increase.
   D) decrease.
24. A decrease in the fixed time cost of working will cause an increase in hours of work and
   A) therefore, a decrease in hours of leisure.
   B) an increase in hours of leisure.
   C) no change in hours of leisure.
   D) an uncertain change in hours of leisure.
Problems

1. One part of the Ohio welfare system is called “Ohio Works First”. The program provides cash assistance for families depending on the number of dependents in the family and the family’s earnings. For example, a single mother with two children is eligible for cash assistance if her earnings are at or below $630. If eligible for benefits, she will receive $630 minus an adjustment factor that equals one-half of any labor earnings above the exemption of $250 per month. For example, a woman who earns $250 or less will be entitled to a monthly benefit of $630. A woman who earns $500 per month would receive $630-$125=$505. A woman earning more than $630, however, is not eligible for benefits.

To illustrate the effect of this program, consider the budget constraint drawn below for Mary. The budget constraint is drawn to reflect her job opportunities with no welfare program.

![Budget Constraint Diagram]

Based on the budget constraint,

a. what is Mary’s wage rate? ___________

b. what is Mary's nonlabor income? _________

c. On top of the above diagram, draw the budget constraint created by the introduction of the OWF program. For full credit, you should label the numeric values of hours and income levels associated with any “critical points” on the budget constraint. Be sure that you label the new budget constraint so that it is easy to identify.

d. Based on the diagram you drew, what range of hours would NOT be chosen by Mary if she has the opportunity to draw OWF benefits? Explain.
6. Consider the budget constraint for Joe given below to answer the questions that follow.

<table>
<thead>
<tr>
<th>Total income per week</th>
<th>hours of leisure per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>112</td>
</tr>
<tr>
<td>100</td>
<td>92</td>
</tr>
<tr>
<td>300</td>
<td>72</td>
</tr>
<tr>
<td>500</td>
<td>112</td>
</tr>
</tbody>
</table>

a. What is Joe’s hourly wage and non-labor income?
   Wage = $10 per hour; Non-labor income=$100 per week.

b. On the budget graph above, draw a budget line representing the following unemployment insurance program assuming that Joe previously worked 40 hours per week and becomes unemployed. Provide numeric detail for earnings and hours associated with key points on the new budget line.
   Upon being laid off, the worker will receive an unemployment insurance check that replaces 50% of her prior labor earnings. If he accepts a new job and earns up to 1/2 of prior earnings, the unemployment insurance check is not reduced. If he accepts a new job and earns more than 1/2 of prior earnings, the unemployment insurance check is eliminated.

c. Refer to your budget constraint above to describe the range of hours worked that would be inconsistent with utility maximization. Why would working in this range be “irrational”?

d. Suppose that the program is adjusted so that the unemployment insurance benefit is reduced by $.50 for every $1 earned. Draw Joe’s budget constraint for this system on the diagram above. Provide numeric detail to illustrate “key” points on the budget line.

e. Would the change in the UI program described in (d) cause a person to work more or less hours? Why? (If the answer depends on how much they worked under the old program, explain how.)