Microeconomics, Module 21, “Labor Markets” (Chapter 16)

Illustrative Test Questions (representative of the final exam questions)

(The attached PDF file has better formatting.)

Question 21.1: Leisure

Leisure consists of all activities other than

A. Consumption
B. Sleep
C. Household production
D. Labor
E. Use of capital

Answer 21.1: D (Leisure time is defined as total time minus labor time. Landsburg notes that perhaps sleep time should be considered separately, though he does not change the definitions in the text.)

Question 21.2: Wage Rate

At the worker’s optimum, the wage rate equals the marginal value of

A. Leisure
B. Labor
C. Consumption
D. Income
E. Capital

Answer 21.2: A (or B)

The real wage rate is also the marginal *product* of labor, which should equal the marginal value of leisure.

Question 21.3: Wage Rate and Marginal Value of Leisure

If the wage rate exceeds a worker’s marginal value of leisure, he or she

A. Should choose to work fewer hours.
B. Earns the maximum rent for his human capital.
C. Is being exploited by the employer.
D. Will be better off with increased work effort.
E. Should substitute capital for work effort.

Answer 21.3: D

Question 21.4: Non-Labor Income

A decrease in a worker’s non-labor income causes

A. An increase in the amount of labor he supplies
B. An increase in the wage rate.
C. A decrease in work effort only if the substitution effect outweighs the income effect.

D. A decrease in work effort only if the income effect outweighs the substitution effect.
E. An increase in his marginal value of leisure.

Answer 21.4: A

A decrease in non-labor income has a wealth effect (which Landsburg refers to as an income effect). A worker with less money must work longer hours to pay for needs and expenses, such as food and clothing. A substitution effect stems from changes in the wage rate, which has not changed in this scenario.

The marginal value of leisure does not change, but the marginal value of labor increases, since the worker places more value on wages. Since the labor supply increases and the marginal product of labor curve does not change, the equilibrium real wage rate decreases.

Question 21.5:

Which of the following situations will result in an increase in the laborer's work effort?

A. An increase in his non-labor income.
B. A higher wage rate, if the substitution effect dominates the labor income effect.
C. A higher wage rate, if the income effect dominates the labor substitution effect.
D. An increase in his marginal value of leisure.
E. A permanent technological improvement that raises labor's marginal product.

Answer 21.5: B

An increase in non-labor income reduces the laborer's work effort. A higher wage rate has two effects:

- The *substitution effect* elicits more labor, since each additional hour of labor now brings more benefits.
- The *income effect* (which Barro calls a *wealth effect*) lowers the labor supply, since workers have more money and less need for additional work hours.

Question 21.6: Substitution Effect

If the wage rate falls, then the substitution effect causes an individual's work effort to

A. Fall
B. Rise
C. Rise if the labor supply curve is backward bending; otherwise to fall.
D. Fall if the labor supply curve is backward bending; otherwise to rise.
E. Remain unchanged

Answer 21.6: A

The question asks about the substitution effect, not the wealth effect. A backward bending supply curve says the wealth effect dominates the substitution effect at high wage rates.

Question 21.7: Changes in Wage Rates

Workers' incomes rise when the wage rate increases, which increases the demand for leisure and reduces work effort. This phenomenon is known as

A. Compensating differentials
B. The income effect

C. The substitution effect
D. Intertemporal substitution
E. The marginal product of labor

Answer 21.7: B

Increases in the wage rate elicit *more* work if the substitution effect dominates the income effect. At high wage rates, the income effect may dominate. Barro uses the term *wealth effect* instead of income effect, but the meaning is the same.

Question 21.8: Unpleasant Work Attributes

All other things being equal, an additional payment is needed to compensate workers for unpleasant aspects of their job. This additional payment is known as

A. Rent on human capital
B. Nonlabor income
C. Compensating differential
D. Surplus value
E. Outsourcing

Answer 21.8: C

Question: Do compensating differentials have much effect on wages in the real world?

Answer: They have a large effect. Consider the market for journalists. Journalism is a difficult job requiring good writing skills, high motivation, and an ability to meet deadlines. But so many young people want to be writers – and journalism is viewed as a training ground for writers – that low wages are sufficient to attract the applicants needed.

Actuarial jobs are the opposite. Many actuarial candidates don't like the constant study. The job of a new actuarial student may be no more difficult than that of a new underwriter, but a higher salary is needed to attract actuarial candidates.

Question 21.9: Labor supply curve

When is an individual's labor supply curve most likely to be backward bending?

A. At low wage rates, when income effects are sufficiently large.
B. At high wage rates, when income effects are sufficiently large.
C. At low wage rates, when substitution effects are sufficiently large.
D. At high wage rates, when substitution effects are sufficiently large.
E. At either high or low wage rates, when substitution effects are sufficiently large.

Answer 21.9: B

A backward bending supply curve means that the supply of labor decreases when the real wage rate increases. At high wage rates, workers earn all they need without working full time; an increase in the real wage rate may cause the worker to work less and enjoy more leisure time.

Question: The theory makes sense. But the highest paid managers in my company work more than anyone else; how does that fit with the theory?

Answer: Low status employees may not like their work. A file clerk, secretary, laborer, or junior underwriter may prefer leisure at home to job taks. But the high paid manager often loves the job (as well as the power over others). The manager works more hours because the job provides the satisfactions that other workers get from their leisure time.

Question 21.10: Labor supply

Labor supply may increase when wages are temporarily high, because workers engage in

A. Human capital investment
B. Unionizing
C. Hoarding
D. Negotiations for compensating differentials
E. Intertemporal substitution

Answer 21.10: E

Question: Labor supply always increases when wages increase; why is this different?

Answer: If the increase in the wage rate is permanent, the change in the labor supply may be small. If the workers are well paid and the income effect is large, the change in the labor supply may even be negative (a backward bending supply curve). But if the wage increase is temporary, almost all workers increase their labor supply.

Question: Do we observe this in the insurance industry?

Answer: We see this after natural catastrophes. The demand for construction workers increases after a hurricane (to rebuild damaged homes), and wage rates rise temporarily. Construction workers seem to come out of the wood-work to fill the need for more laborers, and a relatively small increase in the wage rate is sufficient to attract the new workers needed. In contrast, if a city is expanding steadily and the increase in the construction wage rate will be permanent, a large increase is needed to attract new workers.

Question 21.11: Supply and demand for labor

If workers own capital and a technological improvement *permanently* raises the marginal product of labor throughout the economy, which of the following is *least* likely to occur? (Assume the production function becomes steeper because the marginal product of labor is higher, but it is not larger at the current amount of labor.)

A. The demand for labor will rise.
B. The supply of labor will fall.
C. The equilibrium quantity of labor will fall.
D. The equilibrium quantity of labor will rise.
E. The equilibrium wage rate will rise.

Answer 21.11: C

Demand for labor increases because each hour of work is now worth more to the employer. Workers own capital, so they get some of the increased revenue and they are wealthier. The supply of labor falls because laborers are more wealthy and need less additional income. The wage rate rises because demand increases and supply falls. The equilibrium quantity of labor rises because the substitution effect from a higher marginal product of labor elicits more labor.

Question: Why does labor rise instead of fall? The substitution effect causes labor to rise, but the wealth effect causes labor to fall.

Answer: The question assumes the wealth effect occurs only if labor increases.

Question: How can demand for labor rise if the supply of labor falls? Don't we say that supply must equal demand?

Answer: That is a short-hand expression. Demand means the demand curve, and supply means the supply curve. These two curves are different, with different slopes; one is upward sloping and one is downward sloping. They cannot possibly be equal. The expression that supply equals demand means that in equilibrium the *quantity demanded* equals the *quantity supplied*. The wage rate rises or falls to ensure equilibrium.

Question 21.12: Intertemporal substitution

Suppose workers own capital and a technological improvement raises the marginal product of labor throughout the economy, but workers believe that this improvement is only temporary. How must the analysis of this situation be changed to take into account intertemporal substitution?

A. Intertemporal substitution will lower labor's marginal product, so the increase in the demand for labor will be lessened.
B. Intertemporal substitution will reinforce the substitution effect, so the possibility of a backward bending labor supply curve is eliminated.
C. Intertemporal substitution will make the shifts in the labor supply and demand curves even larger, so the resulting increase in the wage rate will be magnified.
D. Intertemporal substitution will increase the supply of labor, offsetting and perhaps overcoming the income effect of the technological improvement.
E. Intertemporal substitution to use more fixed capital and less variable labor.

Answer 21.12: D