1. Pre-registration begins this week. Let us suppose that Tilly is one of my advisees and we are talking about her future on January 1 of this year. She will have to go to school for all of this year to finish up and will be able to get a job as a financial analyst. If she does not go to school this year, she could get a job as a teller. She plans to stop working at the end of 2007 and have a family. Her salaries are given below, along with the cost of staying at OWU.

a. In light of the information below and assuming a 20% discount rate, please calculate the present value of each occupation.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Analyst</td>
<td>-$25,000</td>
<td>$48,000</td>
<td>$50,000</td>
</tr>
<tr>
<td></td>
<td>(cost of OWU)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Banker</td>
<td>$20,000</td>
<td>$21,000</td>
<td>$22,000</td>
</tr>
</tbody>
</table>

Financial Analyst PV:

\[
\text{PV} = \frac{-25,000}{(1.20)^1} + \frac{48,000}{(1.20)^2} + \frac{50,000}{1.20} + \frac{48,000}{1.20^2} + \frac{50,000}{1.20^3} + \frac{50,000}{1.20^4} + \frac{50,000}{1.20^5} + \frac{50,000}{1.20^6} + \frac{50,000}{1.20^7} + \frac{50,000}{1.20^8} + \frac{50,000}{1.20^9} + \frac{50,000}{1.20^{10}}
\]

\[
\approx -19,177.22
\]

Personal Banker PV:

\[
\text{PV} = \frac{20,000}{(1.20)^1} + \frac{21,000}{(1.20)^2} + \frac{22,000}{1.20} + \frac{21,000}{1.20^2} + \frac{20,000}{1.20^3} + \frac{19,000}{1.20^4} + \frac{18,000}{1.20^5} + \frac{17,000}{1.20^6} + \frac{16,000}{1.20^7} + \frac{15,000}{1.20^8} + \frac{14,000}{1.20^9} + \frac{13,000}{1.20^{10}}
\]

\[
\approx 52,777.77
\]

b. Which occupation should she choose? Why?

3/2  Personal Banker  Higher Present Value.

c. Approximately what is the current rate of return on getting a college degree? (For a college degree in general, not just the last year.)

3/2  11.42%

d. Please given an example of something that is counted in the social rate of return to education, but not the private rate.

3/2  Subsidized tuition by government financial assistance from others added taxes paid by society due to added income better functioning of democracy.
2. There are several theories of discrimination. In each case, please cite the theory, who came up with the theory and briefly explain how it accounts for the difference in earnings or employment.

a. Ralph is the owner of Ralph's Pretty Good Grocery. (Their motto: "If we don't have it, you can get along without it.) He finds it hurts sales when workers don't show up as potential customers get discouraged by long lines. He has noticed in the past that males tend to miss work less often than women and as a result he has a strong preference to hire males. This is an example of statistical discrimination. Lester Thurow came up with the idea. Basically, each group (gender) has different average characteristics. People are treated as if they had the characteristics of their sum. It is an inexpensive way for an employer to gather information. The problem is, some women would have good attendance but are lumped with all women.

b. From 1946-62 the Washington Redskins football team only had three seasons where they won more games than they lost. They were the last team in the National Football League to have a black football player. (In 1962, then President Kennedy influenced the owner to integrate the team.) You may assume that there were many good black football players in those years and that winning is directly related to a team's profits. Becker's theory of discrimination. The owner had a utility function

\[ U = f(N, disc) \]

As the owner pursued his taste for discrimination, he had a football team that was not as good and lost more games and made less money.

c. A study by Kahn and Sherer, two economists looked at salaries in the National Basketball Association. They found out that all else equal, adding a white player on a team, who was as good as a similar black player, would result in 8,000-13,000 more people attending the games in the course of a season. As a result, the black players tended to earn about 20% more than white players with similar records. (You may assume the owners are not prejudiced in this case.)

Gary Becker's theory of customer discrimination. The employer is not discriminating, but wants to maximize \( \Pi \). If the fans prefer white players, the owner will hire whites to gain fan and revenue.
3. a. We spent a great deal of time discussing internal labor markets and job ladders. Please discuss what they are and give an example of one. (The example need not be an actual internal labor market and job ladder, but just illustrates the concepts.)

An internal labor market is the group of jobs that are filled through internal promotion rather than external hiring. Just as a hierarchy of jobs that workers move up, one enters as a starter and then can move up the job ladder. One can only become a loader, driver or dispatcher by starting at the bottom and moving up.

b. Internal labor markets can be used to facilitate a certain type of training. What is this type of training and explain how it is facilitated by internal labor markets and job ladders?

Firm specific OJT (on the job training) can be a rule such as seniority is used, then workers will pass this certain level of OJT to others with an SkL, there is reward to staying with the firm and keeping the firm specific OJT @ the firm.

c. Cite three ways that wages are set within an internal labor market. Briefly explain each in a couple of sentences.

- Social Stakes: those that are in supervisor positions tend to be paid more.
- Relative Wages: tend to be maintained, e.g., all workers might get a 7% raise, wages fall with difficulty once a certain wage rate has been achieved, people fight to keep it.
- Community Wage Surveys: An employer can survey other employers to see what they are paying.
- Job Evaluation: Evaluate jobs in terms of skills required, training needed, effort, pleasantness of working conditions, etc. Give pts and translate into.$/h relative wages (core to core) Compass: What really make influences worker demands, expectations
Multiple Choice. Two points each.

4. The area of indeterminacy is:
   a. the range of wage rates within which a labor union has choice over the wage it wishes to obtain.
   b. the range of employment levels possible in a competitive labor market.
   c. larger the more the labor market corresponds to the assumptions of the competitive model.
   D. the range of wage rates within which demand and supply allow firms discretion as to their pay policy.

5. A monopsonist will:
   a. pay a lower wage than a competitive firm but will employ more labor.
   b. pay workers a wage that is less than their marginal revenue product.
   c. earn more profit than a competitive firm because it pays low wages.
   d. maximize profits if it hires labor up to the point where \( W = MRPL \)

6. The marginal cost of labor schedule:
   a. is horizontal for a perfectly competitive firm but upward sloping for a monopsonist.
   b. is horizontal for a perfectly competitive firm but is downward sloping for a monopsonist.
   c. shows the increase in revenue received by the firm if it hires one more worker.
   d. intersects the labor demand curve at the point where the demand curve is unit elastic.

7. The upward sloping portion of the average worker’s age-earnings profile can be explained as arising from:
   a. the practice of companies to reward additional pay and promotions to workers on the basis of years of seniority.
   b. the fact that workers, on average, build up a greater stock of human capital through the process of on-the-job training (at least up to a certain age).
   c. the decision of companies to motivate employee work effort by deferring a portion of the worker’s Compensation until later in their life.
   D. all of the above

8. Obtaining a Masters degree will be a more attractive investment:
   a. the higher the market rate of interest.
   b. the larger the earnings of persons with a bachelor’s degree.
   c. the older the person.
   D. the longer the person expects to work.

9. If the supply of college graduates is greater than the demand, the human capital model predicts:
   a. the relative college wage (the wage of college graduates as a percent of the wage of high school graduates) should fall.
   b. the private and social rate of return to college education should fall.
   c. fewer people will decide to attend college.
   D. all of the above.
10. Workers earn a monopoly rent when:
   a. the firm they work for is a monopoly.
   b. the wage they earn is higher than the competitive level due to some form of market power.
   c. the wage they earn is above their minimum supply price.
   d. their labor supply curve is perfectly inelastic.

According to human capital theory, the prospect of a discontinuous work career would lead women to choose occupations:
   a. that have a low rate of atrophy (loss over time) of human capital.
   b. which require general OJT rather than specific OJT.
   c. for which there are relatively short job ladders.
   d. all of the above.

12. Assume occupations A and B are identical in every respect except that occupation B involves handling radioactive wastes, an event which, on average, reduces a worker's lifespan by ten years. In equilibrium:
   a. the wage rate in occupation B will be higher than in occupation A, but which of the two occupations yields the higher present value of lifetime income can not be predicted.
   b. the present value of earnings in the two occupations will be equal, but annual earnings will be higher in occupation B.
   c. the present value of lifetime earnings in occupation A will be greater than in occupation B.
   d. the wage rate, annual earnings, and present value of lifetime earnings in occupation B will be greater than in occupation A.

13. A comparable worth law would mandate that:
   a. men and women in a firm be paid equal wages.
   b. men and women doing the same job in the firm be paid equal wages.
   c. men and women doing jobs of equal value in the firm be paid equal wages.
   d. men and women in a firm be paid a wage that is comparable with the wage earned by workers doing the same job in other firms.

True/False. Two points each.

T 14. When corrected for inflation, the federal minimum wage is approximately the same as it was 20-30 years ago.

T 15. The work of Card and Krueger seems to indicate that the minimum wage has had a large negative impact on the employment of teenagers.

T 16. The majority of Americans employed at the minimum wage come from households in poverty.

F 17. In general, a labor monopsony tends to reduce the wages of workers.

F 18. Before free agency, Major League Baseball exhibited many characteristics of a monopsonist situation.
9. The economist credited with the renewed interest in the impact of education in the early 1960s was Edward Lazear.

10. Age-earnings profiles tend to be humped (upside down "U") shape.

11. To the extent that the signaling hypothesis is correct, there would be no benefit to a worker from acquiring additional schooling.

12. The evidence presented in class seems to indicate the higher a job is in a firm's hierarchy, the more likely a job vacancy is to be filled from within the firm rather than outside.

13. Proponents of the dual labor market theory believe that the acquisition of human capital is not enough by itself to have a major impact on wages.

14. Firms that pay efficiency wages are likely to reduce turnover.

15. Firms that pay efficiency wages are likely to increase shirking.

16. The gap between the pay of a CEO and those under him/her is larger in the United States than other nations.

17. Under tournament theory a worker's marginal revenue product would not be equal to their earnings.

18. Tournament theory emphasizes that a worker's reward is related to their absolute contribution to the firm, not the contribution relative to other workers.

19. High taxes make fringe benefits more desirable.

20. Defined contribution benefit pensions give workers a fixed pension based on years of employment and their salary in their last year or years of employment.

21. Women who work full-time tend to earn about .77 for each dollar a man earns.

22. The ratio of the wages of women who work full-time to that of men who work full-time has remained almost constant since 1960.