Chapter 4 MULTIPLE-CHOICE QUESTIONS

1. Human capital investment consists of:
   a. any activity that enhances the quality of labor
   b. expenditures for formal schooling only
   c. expenditures for on-the-job training only
   d. any activity that leads to the substitution of physical capital for labor

2. “Expenditures on education and training can be treated as investment in human capital.” This statement is:
   a. true—current expenses are incurred with the expectation they will be more than compensated for by greater future returns
   b. true—education must be financed by borrowing money
   c. false—the market for college loans is too imperfect to be consistent with investment models
   d. false—education is purchased for its current (consumption) value, not its future (investment) value

3. Approximately what percentage of the U.S. population had completed four or more years of college by the year 2010?
   a. 8%  b. 14%  c. 61%  d. 35%

4. Age-earnings data show that:
   a. differences in earnings by education level disappear for workers age 55 and over
   b. men’s earnings increase with educational level but not women’s earnings
   c. earnings rise with factors such as family background and personal drive, but not education level
   d. higher educational levels are consistently associated with higher earnings

5. Available evidence indicates that:
   a. age-earnings profiles vary with education, but not with age
   b. age-earnings profiles vary with age, but not with education
   c. age-earnings profiles of workers with more education tend to be flatter, but higher, than those with less education
   d. differences in earnings between workers who have more education and those who have less education generally widen with age

6. The total economic cost of formal education typically does not include:
   a. expenditures for tuition, books, and fees
   b. earnings foregone by choosing not to enter the labor force
   c. expenditures for room and board
   d. transportation expenses to and from college

7. The primary indirect cost of going to college is:
   a. earnings given up by not entering the labor market directly after high school
   b. an enhanced future flow of earnings
   c. the value of room and board that would have been provided at home
   d. tuition expenses
Questions 8 – 11 are based on the following diagram:

8. According to human capital theory, areas 1, 2, and 3 represent respectively:
   a. indirect costs, direct costs, and incremental earnings
   b. direct costs, indirect costs, and incremental earnings
   c. indirect costs, direct costs, and total earnings
   d. direct costs, indirect costs, and total earnings

9. In deciding whether or not to go to college, one would compare the discounted value of:
   a. area 3 to the discounted value of area 1
   b. area 3 to the discounted value of area 2
   c. area 3 to the discounted value of areas 1 and 2
   d. areas 2 and 3 to the discounted value of area 1

10. Which one of the following would increase the likelihood of investing in a college education?
    a. an increase in area 1
    b. a reduction in area 2
    c. a reduction in the retirement age
    d. a reduction in area 3 and an equal increase in area 2

11. Suppose there is now a 25% likelihood that a person’s work career may be interrupted for ten years after schooling has been completed. In the diagram above, this development would:
    a. have no impact
    b. shrink area 1 and reduce the likelihood of investing in a college education
    c. shrink area 2 and increase the likelihood of investing in a college education
    d. shrink area 3 and reduce the likelihood of investing in a college education

12. Consider an individual who will invest a total of $10,000 in direct and indirect costs for training in order to increase earnings by $12,500 for the next year. Suppose the interest rate is 8%. If this person plans to retire the following year, the net present value of this investment is closest to:
    a. zero
    b. $1600
    c. $2500
    d. $11,600
13. An earnings-maximizing student would attend college if:
   a. the net present value of a college education is zero
   b. the internal rate of return on a college education is positive
   c. the internal rate of return on a college education exceeds the interest rate on borrowed funds
   d. there is an earnings gain associated with a college education

14. Which one of the following would indicate a profitable human capital investment?
   a. The net present value is –$12,000
   b. The interest rate on borrowed funds is 4% and the rate of return is 3%
   c. The interest rate exceeds the net present value
   d. The rate of return exceeds the interest rate on borrowed funds

15. At the optimal amount of education, the internal rate of return on education is:
   a. maximized
   b. higher than the market rate of interest
   c. lower than the market rate of interest
   d. equal to the market rate of interest

16. Which one of the following circumstances would most likely lead to increased investment in education by women?
   a. An increase in the likelihood of interrupted labor market careers
   b. Improved employment opportunities for women
   c. Higher discount rates for women than men
   d. Persistent discrimination against women

17. All else equal, investment in education will be greater, the:
   a. higher the interest rate
   b. greater the direct cost of education
   c. lower the expected retirement age
   d. greater the earnings differential between more and less educated workers

18. Other things equal, the lower the cost of a human capital investment:
   a. the larger the net present value of the investment
   b. the lower the rate of return on the investment
   c. the fewer the number of people who will find the investment profitable
   d. the lower the interest rate on funds borrowed to finance the investment

19. Human capital theory predicts that the proportion of people attending college will decrease if:
   a. the age at which retirement benefits are received is lowered to 59
   b. the age at which retirement benefits are received is raised to 75
   c. there is a relatively large population of new high school graduates
   d. there is an increase in the demand for college educated workers

20. Most rate-of-return studies of education indicate that:
   a. social rates of return generally exceed private rates of return
   b. private rates of return are about 2.5% – 7%
   c. private rates of return are about 10% – 15%
   d. private rates of return have held steady over the 1956 – 2008 period
21. From 1980 to the present, the college wage premium:
   a. rose for women but fell for men   c. fell for both women and men
   b. rose for men but fell for women   d. rose for both women and men

22. The college wage premium:
   a. rose during the 1980s, but fell in the 1960s and again from 1990 to the present
   b. fell during the 1970s but has risen consistently since then
   c. rose during the 1970s and 1980s, but has fallen consistently since then
   d. has risen consistently since 1960

23. The increase in the college wage premium during the 1980s was most likely caused by:
   a. increased demand for college graduates due to changes in the structure of the economy
   b. increased supply of college graduates from the large “baby boom” generation
   c. changes in technology that reduced the relative supply of college-trained workers
   d. increased demand for high school graduates, particularly males

24. The declining college wage premium in the 1970s is generally attributed to the:
   a. growing demand for college graduates in that period
   b. shrinking supply of college graduates in that period
   c. growing supply of college graduates in that period
   d. shift of employment from manufacturing to services

25. Studies of the rate of return on human capital must be interpreted with care because:
   a. the social return may not equal the private return
   b. past differences in earnings are no guarantee of future differences in earnings
   c. a high average rate of return is no guarantee of a high personal rate of return
   d. all of the above

26. The private rate of return on human capital may _____ the social rate because _____.
   a. understate; schooling is subsidized
   b. understate; schooling provides external benefits
   c. overstate; schooling provides external benefits
   d. overstate; schooling and ability are positively correlated

27. All else equal, the social rate of return to education will be lower than the private return if:
   a. there are external benefits to education
   b. the social return correctly calculates benefits using after-tax values
   c. the social return correctly calculates costs by including education subsidies
   d. more educated workers have lower crime rates and unemployment rates

28. In calculating the social rate of return on a human capital investment one would:
   a. deduct taxes from incremental earnings
   b. treat public subsidies to education as a part of the costs
   c. exclude any external benefits associated with the investment
   d. treat public subsidies to training as part of the benefits

29. Based on standardized test scores for students in the following countries, which has the highest measured schooling quality?
   a. France   b. India   c. U.S.   d. Japan
30. The demand for human capital curves slope downward and to the right because:
   a. education is a screening device
   b. as the interest rate rises, the net present value of education rises
   c. the benefits of increased education diminish as schooling continues
   d. investment in education is subject to increasing marginal returns

31. Typically, as the level of education increases:
   a. costs rise and benefits fall, reducing the internal rate of return to education
   b. costs rise and benefits fall, increasing the internal rate of return
   c. costs fall and benefits rise, increasing the internal rate of return
   d. both costs and benefits fall, having an unpredictable effect on the rate of return

Questions 32 – 35 are based on the following diagram.

32. Refer to the diagram. If D₁ is this individual’s investment demand curve, then the optimal amount of education:
   a. is E₁ from society’s standpoint
   b. is E₂ from society’s standpoint
   c. is E₁ from this individual’s standpoint
   d. cannot be determined without further information

33. Refer to the diagram. Which one of the following might cause a person’s human capital investment demand curve to shift from D₁ to D₂?
   a. The person discounts future earnings at a higher rate than before
   b. The indirect costs of education increase
   c. The college wage premium falls
   d. The college wage premium increases

34. Refer to the diagram. Compared to D₁, a person whose demand curve is given by D₂ will likely obtain:
   a. more education and receive higher earnings
   b. more education and receive lower earnings
   c. less education and receive higher earnings
   d. less education and receive lower earnings
35. Refer to the diagram. Which one of the following will shift the supply of investment funds curve downward?
   a. A reduction in the availability of student loans
   b. Greater ability to transform schooling into earnings
   c. An increase in expected work life
   d. An increase in grants and scholarships

36. Personal differences in demand for human capital curves can be explained by differences in all of the following, except:
   a. ability
   b. access to investment funds
   c. discrimination
   d. discount rates

37. Private loans to finance investments in human capital:
   a. are difficult to obtain because the financial return to education has been decreasing
   b. are difficult to obtain because a person cannot readily pledge collateral on human capital
   c. are granted by banks just as they are to finance investment in machinery or houses, without regard to collateral
   d. are rarely subsidized by government because they are granted readily by private banks

38. Which one of the following most closely approximates pure specific training?
   a. Learning tax accounting
   b. Learning a management information system that is unique to your firm
   c. Majoring in management information systems at a major university
   d. Learning a widely-used spreadsheet program that is used at your firm

39. Which one of the following observations would tend to widen the dispersion of earnings?
   a. Banks charge higher interest rates on educational loans to those individuals most likely to face discrimination on the job
   b. Those with higher ability face higher costs of investment funds
   c. Human capital investment demand and supply curves are negatively correlated
   d. Poor families pay a larger proportion of family income on education than rich families

40. General training:
   a. will be paid for by the employee in the form of a reduced wage
   b. raises the trainee’s value only to the firm that is providing the training
   c. helps to make labor a quasi-fixed resource
   d. reduces the worker’s value to the firm, because the worker’s wage rate would have to rise

41. Specific training:
   a. will be paid for by the employee in the form of a reduced wage
   b. occurs once a student majors in a specific subject area
   c. helps to make labor a quasi-fixed resource
   d. reduces the worker’s value to the firm, because the worker’s wage rate would have to rise

42. A worker who has obtained specific training is:
   a. more likely to establish a long-term association with an employer because the worker has made an investment he does not wish to lose
   b. more likely to establish a long-term association with an employer because the employer has made an investment she does not wish to lose
   c. both a. and b. are correct
   d. neither a. nor b. is correct
43. Charley’s employer is considering him for a *general* training program that will cost $3 per hour. His current marginal revenue product is $15 per hour and will rise to $20 upon completion of the program. Of the following, Charley’s training and post-training wage, respectively, will most likely be:
   a. $15; $20
   b. $15; $17
   c. $12; $15
   d. $12; $20

44. Mary’s employer is considering her for a *firm-specific* training program that will cost $3 per hour. Her current marginal revenue product is $15 per hour and will rise to $20 upon completion of the program. Of the following, Mary’s training and post-training wage, respectively, will most likely be:
   a. $15; $20
   b. $15; $17
   c. $12; $15
   d. $12; $20

Questions 45 and 46 refer to the following diagram, in which MRP\(_u\) refers to the marginal revenue product of an untrained worker, while MRP\(_t\) refers to this worker’s marginal revenue product as a result of a program of on-the-job training.

45. In the case of *general* training, the wage rate during the training period will be _____, while the post-training wage will be ____.  
   a. W\(_1\); W\(_3\)  
   b. W\(_1\); between W\(_2\) and W\(_3\)  
   c. W\(_2\); between W\(_2\) and W\(_3\)  
   d. W\(_2\); W\(_2\)  

46. In the case of *specific* training, the wage rate during the training period will be _____, while the post-training wage will be ____.  
   a. W\(_1\); W\(_3\)  
   b. W\(_1\); between W\(_2\) and W\(_3\)  
   c. W\(_2\); between W\(_2\) and W\(_3\)  
   d. W\(_2\); W\(_2\)  

47. A firm that provides specific training to its workers:
   a. must reduce the wage during the training period, effectively forcing the worker to pay for the training  
   b. may be prevented by the minimum wage from paying a wage above marginal revenue product during the posttraining period  
   c. will likely provide more training to those who have less formal education  
   d. has a stronger incentive to reduce employee turnover than firms that provide only general training
48. Which of the following statements about on-the-job training is most supported by empirical evidence?
   a. A greater percentage of men than women receive on-the-job training
   b. Job training is more common at smaller firms than larger ones
   c. Workers with more formal education also tend to receive more on-the-job training
   d. Training does not lead to higher job performance ratings

49. Empirical evidence suggests that:
   a. Gender differences in earnings explain most of the gender wage gap
   b. Most training is specific rather than general
   c. Training appears to have little impact on wages
   d. Training lengthens employment durations

50. If education is undertaken as consumption as well as investment:
   a. researchers will understate the private rate of return on human capital investment
   b. researchers will overstate the social rate of return on human capital investment
   c. the investment costs of education will be understated
   d. the benefits of education will be overstated

51. If part of the typical college graduates additional earnings is attributable to ability and not to education:
   a. the screening hypothesis must be false
   b. estimated rates of return will overstate the actual rate of return
   c. there will be less dispersion in the distribution of earnings than otherwise
   d. the social rate of return will understake the private rate

52. If the screening hypothesis is true:
   a. educational attainment and the level of fringe benefits received will be inversely related
   b. the private rate of return to education will tend to overstate the social rate of return
   c. the private rate of return to education will not accurately reflect the gain to the individual student
   d. the college wage premium is much greater than is hypothesized by human capital theorists