Economics 2030
Problem Set 4
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1. At r = 5%, the PV of $50 received 10 years from now is
a. $50
b. $38.6
c. $30.7
d. none of the above

2. At r = 5%, the PV of $50 per year for 10 years is
a. $500
b. $386
c. $307
d. none of the above

3. A lower interest rate
a. means a higher PV
b. means a lower PV
c. has no effect on PV
d. could increase or decrease PV

4. The farther in the future an amount will be received
a. the higher the PV
b. the lower the PV
c. has no effect on PV
d. either the lower or higher the PV

5. A dam will be built at a cost of $1million today. The benefits from the dam start in 1 year & go forever. At r = 4%, what must the benefits per year equal for the project to breakeven?
a. $10,000
b. $40,000
c. $50,000
d. none of the above

6. You throw a die (with 6 sides with #s 1-6 on the sides) & win $60 if either a 2 or a 4 appears. You pay $25 per throw. Your expected payoff is
a. $20
b. $25
c. $5
d. minus $5

7. A firm in a competitive labor market hires to the point where
a. $W = MP_L$
b. $W = VMP_L$
c. $MP_L = 0$
d. none of the above

8. A firm in a competitive labor market hiring the profit-maximizing amount of labor
a. also produces the profit-maximizing output
b. produces less than the profit-maximizing output
c. produces more than the profit-maximizing output
d. there is no relation between hiring the profit-maximizing amount of labor & producing the profit-maximizing output

9. A firm in a competitive labor market hiring the profit-maximizing amount of labor has $MP_L = 50$ & W = \$25. Thus P must equal
a. \$2
b. \$0.5
c. \$25
d. none of the above

10. Bubba currently is employed & can choose jobs that offer different work hours. If the wage Bubba receives at these jobs rises, his desired work hours
a. rise if the income effect outweighs the substitution effect
b. fall if the income effect outweighs the substitution effect
c. only depend on the income effect
d. only depend on the substitution effect

11. Occupation Z now has become safer than before. Thus
a. the supply of labor to Z & the wage in Z increase
b. the supply of labor to Z & the wage in Z decrease
c. the supply of labor to Z increases & the wage in Z decreases
d. the supply of labor to Z decreases & the wage in Z increases

12. Firms tend to pay for
a. general training & firm-specific training
b. general training but not firm-specific training
c. firm-specific training but not general training
d. neither general training nor firm-specific training

13. Firms are compensated for expenditure on general training
a. by paying $W < VMP_L$ during training
b. by paying $W > VMP_L$ during training
c. by paying $W < VMP_L$ after training
d. none of the above

14. Labor saving innovation
a. raises wages & employment
b. lowers wages & employment
c. raises wages & lowers employment
d. lowers wages & raises employment

15. Alison will be hired at a firm that must immediately expend $30,000 in firm-specific training. Her annual expected annual VMP_L = $80,000, her expected work life at this firm is 40 years, & the firm's opportunity cost of funds is 6%. What is her break even W?
 a. $78,000
 b. $79,250
 c. $80,000
 d. $50,000

16. From the previous question, with Alison replaced by Azod, a cyborg with infinite life, what is the breakeven W?
 a. $80,000
 b. $78,200
 c. $78,000
 d. $50,000

17. Martians are subject to employer discrimination. The fewer Martians there are in the work force
 a. the lower will be the wage of Martians relative to others who have the same productivity as Martians
 b. the more Martians who will be employed
 c. the higher will be the wage of Martians relative to others who have the same productivity as Martians
 d. none of the above

18. The repeat customer mechanism
 a. works well in illegal markets
 b. provides incentives for firms to deliver promised levels of quality
 c. works only with warranties
 d. none of the above

19. A buyer who knew quality would pay $100 for a high quality item & zero for a low quality item. Sellers (who know their quality) would accept $70 for a high quality item & zero for a low quality item. If all know 60% of the products offered for sale are high quality
 a. the price of these goods will equal $60
 b. high & low quality goods will be sold
 c. the price will equal zero
 d. both a) & b) are true

20. Skilled jobs require good workers & pay $40. Both good & bad workers are worth $20 in unskilled jobs. A signal is available at a cost per unit of $2 for good workers & $5 for bad workers. Good workers will choose how many units of the signal, y?
 a. $y < 4$
 b. $y < 10$
 c. $10 < y < 20$
 d. $4 < y < 10$

Answers are listed below.*

* 1) c, 2) b, 3) a, 4) b, 5) b, 6) d, 7) b, 8) a, 9) b, 10) b, 11) c, 12) c, 13) a, 14) b, 15) a, 16) b, 17) c, 18) b, 19) c, 20) d