# ECON 2002.01 Midterm Exam
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① (OUP-U3-Q1) You currently work for 40 hours a week at wage rate of £12 an hour. Your free hours are defined as the number of hours not in work, which in this case is 24 hours × 7 days – 40 hours = 128 hours per week. Suppose that you are happy to keep your total weekly income constant. Then: _____

   (A) If your wage rate increases to £16 an hour, then your free time will increase by 6%.

   (B) To have 12.5% more free time, your wage rate needs to increase by £8.

   (C) Doubling the wage rate would decrease your working hours by a third.

   (D) A wage cut of 25% leaves you with only 100 hours of free time.

② (OUP-U3-Q9) The figure shows the indifference curves of a student for the two 'goods', free time and final grade. Based on this information, which of the following statements is correct? _____

|	A	E	F	G	H	D
Hours of free time	15	16	17	18	19	20
Final grade	84	75	67	60	54	50
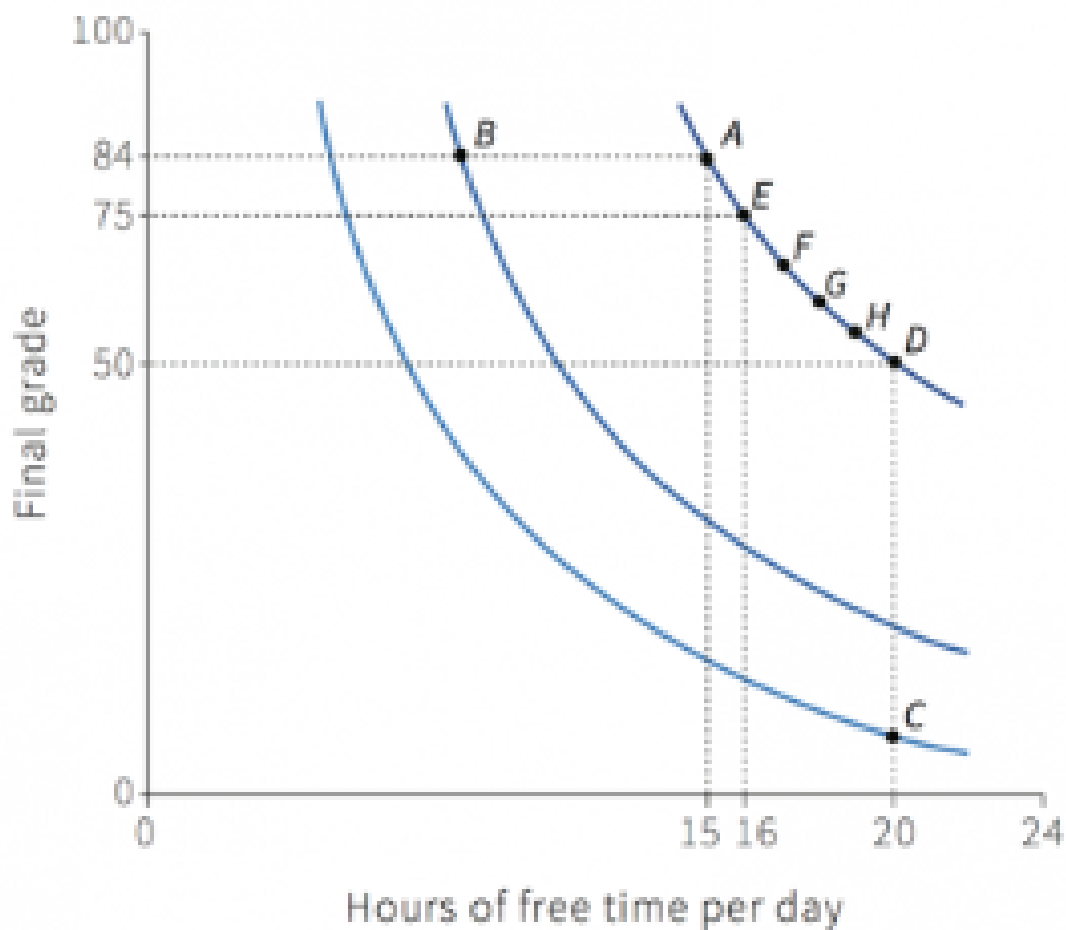
(A) At A, the student is willing to give up 34 grade points for five extra hours of free time.

(B) A is the student's most preferred choice as she would be attaining the highest grade.

(C) The student strictly prefers a grade of 54 with 19 hours of free time to a grade of 67 with 18 hours of free time.

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(D)   If at B the number of free hours is 10, then the student is 50% happier at A than at B.

3. (OUP-U6-Q8) Thomas earns £12 per hour in his current job and works 36 hours a week. He loves his job and puts in his maximum effort with no disutility. In fact, Thomas earns extra utility worth £3 per hour from camaraderie, status, and enjoyment of the job. If he loses this job Thomas has two choices. Either he is able to be self-employed, which earns him £7 an hour for 36 hours a week of work but also gives him disutility equivalent to £2 per hour, or he can be unemployed and receive an unemployment benefit of £150 per week. Thomas is expected to be able to find another job similar to his current one in 24 weeks. Then: _____

(A) Thomas's next best option is to be unemployed.

(B) The employment rent per hour is £8.

(C) Thomas's employment rent is £9,360.

(D) If Thomas chooses the self-employment option then his loss of employment rent is £8,640.

④ (OUP-U6-Q16) The figure depicts the efficiency wage equilibrium of a worker and a firm. Based on this information, which of the following statements is correct? _____
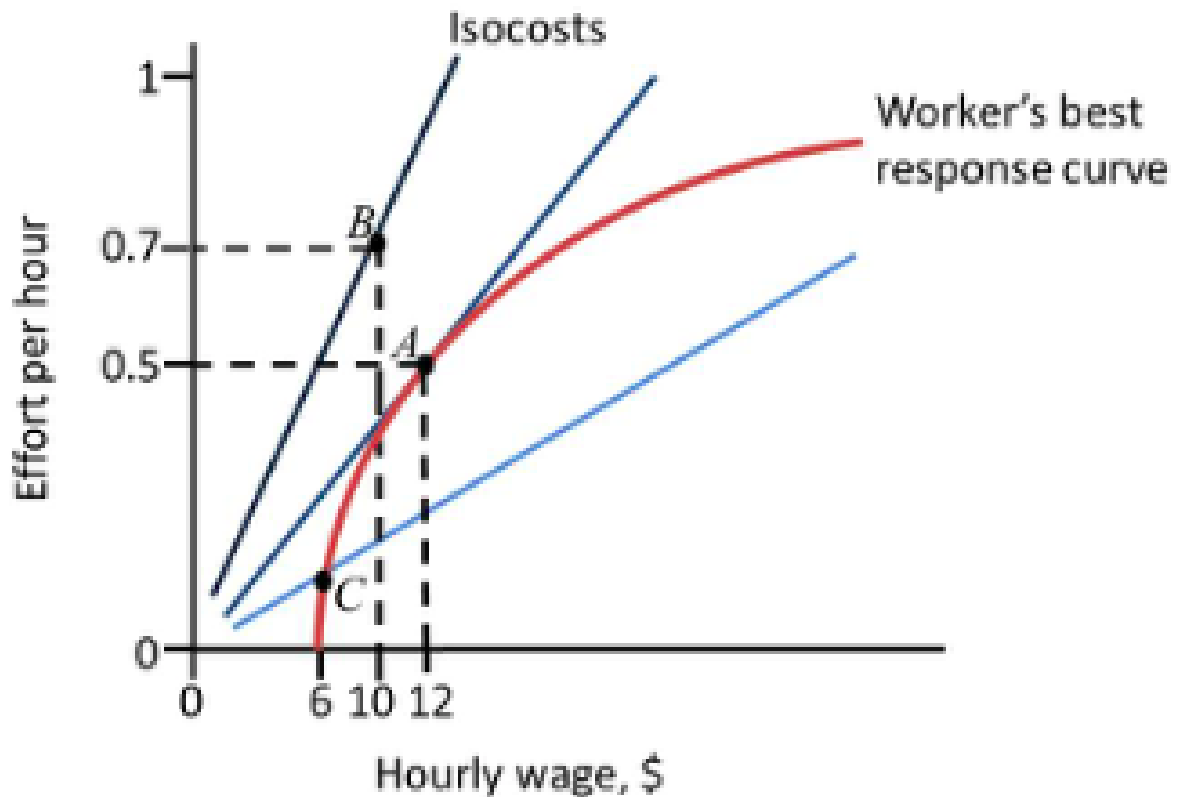
(A) At A, given that the firm pays the hourly wage of $12, the worker's best response is to exert an effort of 0.5.

(B) At A, given that the worker exerts an effort level of 0.5, the firm's best response is to offer the hourly wage of $12.

(C) Therefore the worker receives no rent.

(D) The employer makes profits by coercing the worker to put in some effort.

(5) (ECO-U6-Q5) Maria earns $12 per hour in her current job and works 35 hours a week. Her disutility of effort is equivalent to a cost of $2 per hour of work. If she loses her job, she will receive unemployment benefit equivalent to $6 per hour. Additionally, being unemployed has psychological and social costs equivalent to $1 per hour. Then: _____

(A)   The employment rent per hour is $3.

(B)   Maria's reservation wage is $6 per hour.

(C)   Maria's employment rent if she can get another job with the same wage rate after 44 weeks of being unemployed is $6,160.

(D)   Maria's employment rent if she can only get a job at a lower wage rate after 44 weeks of being unemployed is more than $7,700.

(OUP-U7-Q8) The table represents market demand Q for a good at different prices P. The firm's unit cost of production is £70. Based on this information, which of the following is correct?

| Q	100	200	300	400	500	600	700	800	900	1,000
P	£240	£220	£200	£180	£160	£140	£120	£100	£80	£60

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(A) At Q = 200, the firm's profit is £44,000.

(B) The profit-maximising output is Q = 400.

(C) The maximum profit that can be attained is £45,000.

(D) The minimum profit that can be attained is £0.

(7) (ECO-U7-Q12) This figure shows the marginal cost and marginal revenue curves for Beautiful Cars. Which of the following statements is correct, based on the information shown? _____
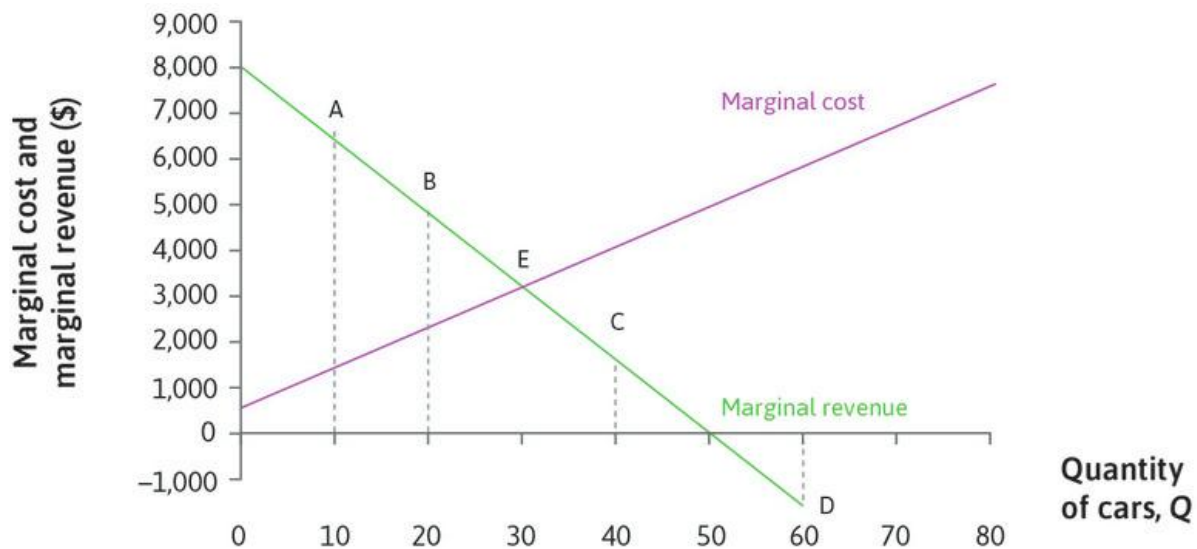

(A) When Q = 40, the marginal cost is greater than the marginal revenue so the firm's profit must be negative.

(B) Revenue is greater when Q = 10 than if Q = 20.

(C) The firm would not choose to produce at point E because marginal profit is zero.

(D) Profit is greater when Q = 20 than when Q = 10.

(8) (OUP-U9-Q22) The figure describes the effect of immigration on un-employment in the labour market. The labour market equilibrium is at A and C before and after the influx of immigration, respectively. Based on this figure, which of the following statements is correct?
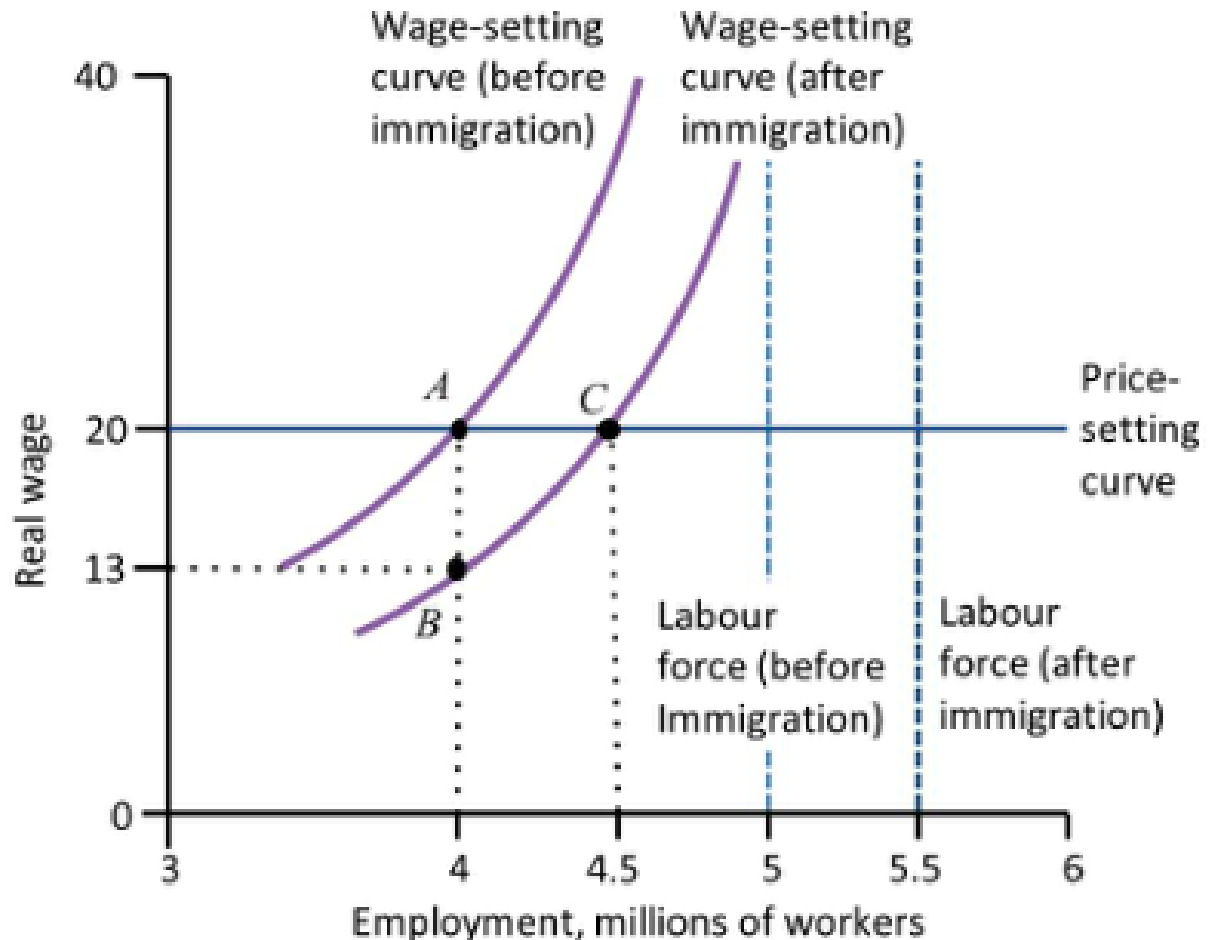

(A) All incumbent workers are unaffected while the labour market adjusts.

(B) All incumbent workers are no worse off in the new equilibrium.

(C) The unemployment rate is unchanged in the new equilibrium.

(D) Firms claim a higher markup in the new equilibrium.

⑨ (OUP-U10-Q12) The diagram depicts Marco's choice of consumptions in periods 1 and 2. He has $100 worth of grain in period 1 and no income in period 2. Marco has two choices. In scheme 1, he can sell the grain that he does not consume and lend the money at 10%. In scheme 2, he can invest the grain that he does not consume (e.g. planting as seed) for a return of 50%. Which of the following statements is correct?
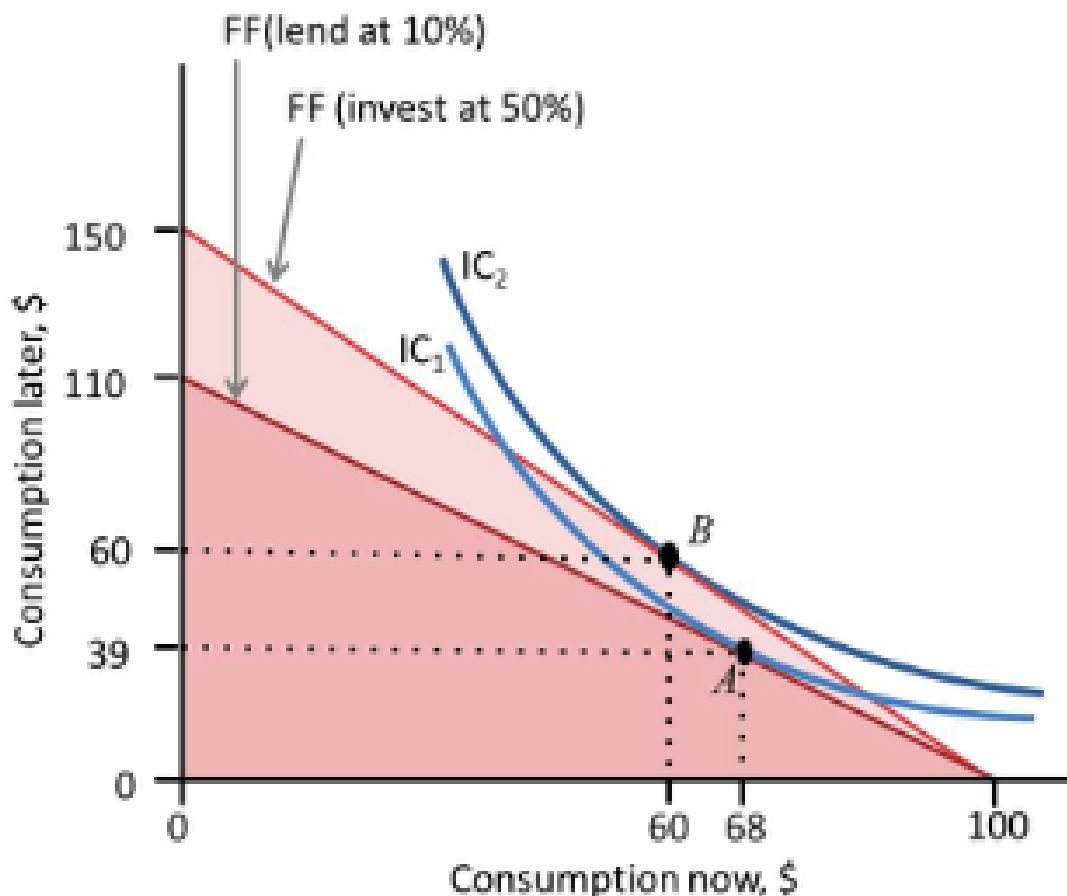

(A) Marco is less impatient at B than at A.

(B) Going from scheme 1 to scheme 2, the substitution and income effects have opposite effects on period 2 consumption.

(C) Marco can do better than consumption choice B by investing all of his grain and consuming the output in period 2.

(D) Marco can do better than consumption choice B by investing all of his grain and borrowing against his period 2 output.

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(10) (TEA-U10-Q2) The following diagram depicts Julia's choice of consumption now and consumption later (next period). She has no income now and an income of $115 later. The current interest rate is 15%. Based on this information, which of the following statements is correct?
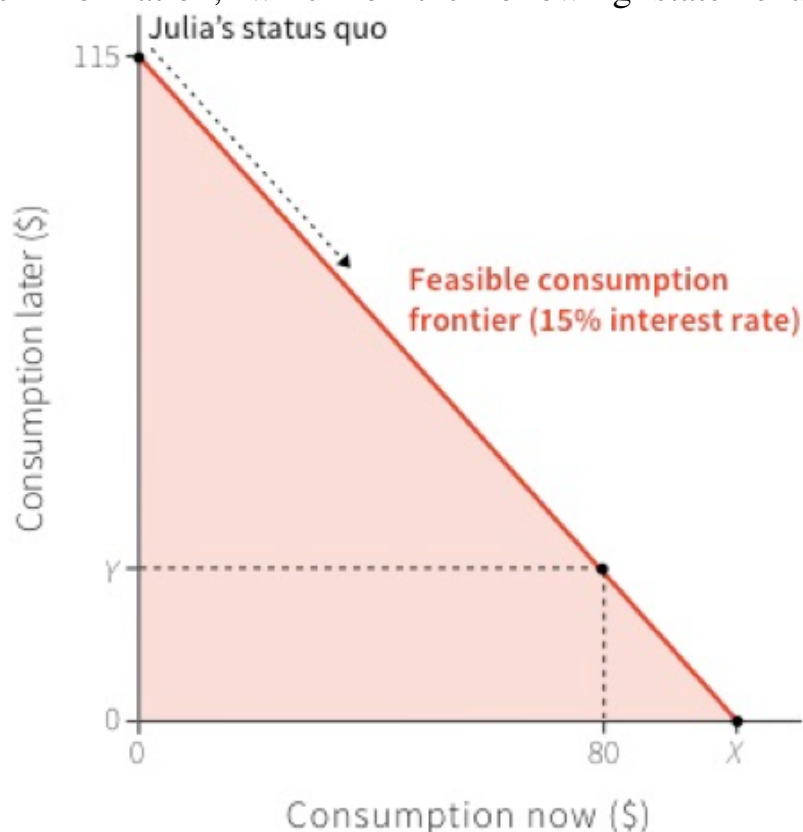
(A) The maximum that Julia can borrow to spend now is $91.

(B) If Julia borrows $80 to spend now, she will have $23 to spend later.

(C) The consumption choice of $60 now and $50 later is a feasible option.

(D) The feasible set will be smaller when the interest rate is 10%.

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(11) (OUP-U3-Q17) The figure shows a student's feasible frontier and her in-difference curves for her final exam grade and the hours of free time per day. Based on this information, which of the following statements is correct?
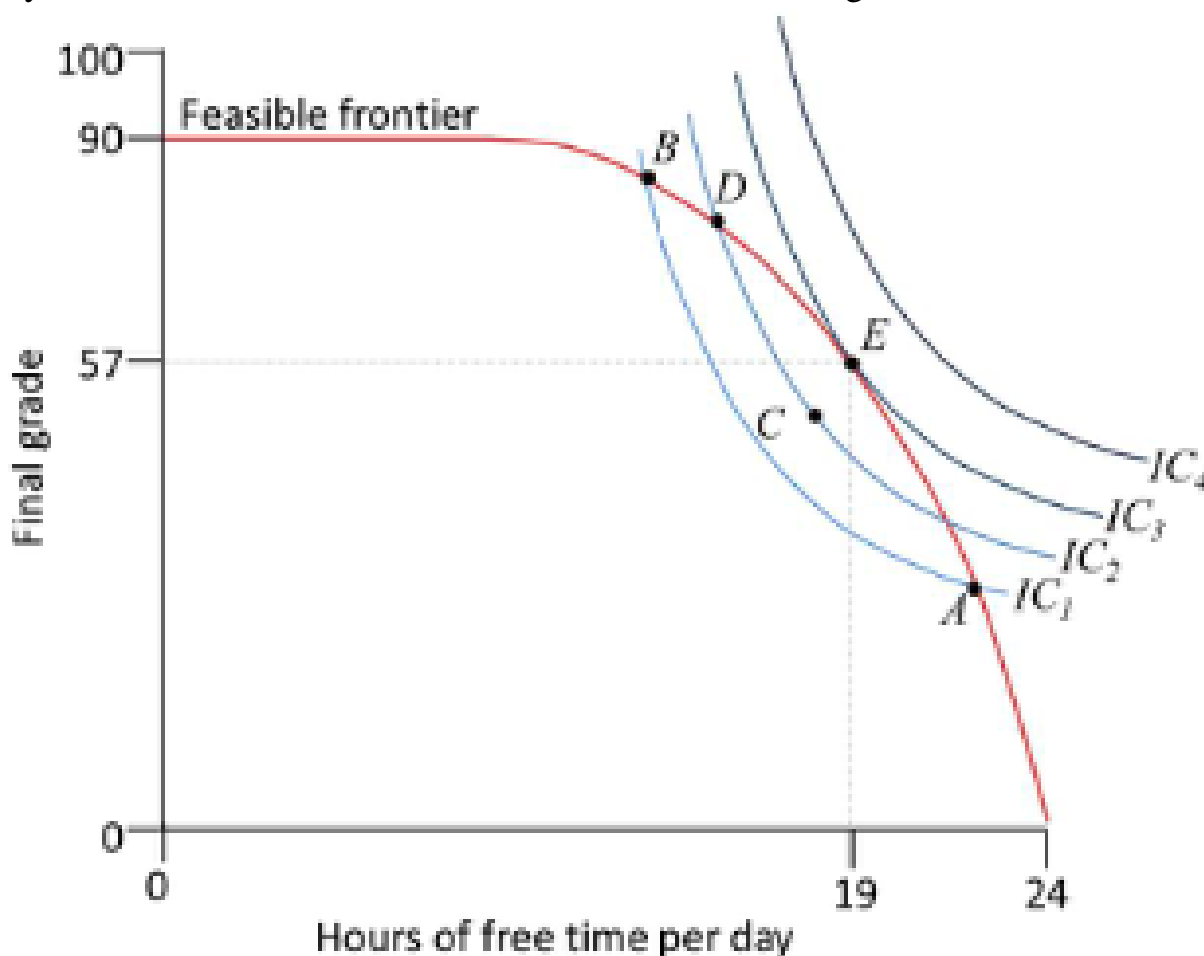
(A) The student prefers D to C, as D is on the feasible frontier.

(B) A or B may be chosen over C despite being on a lower indifference curve, as the student would never choose a point below the feasible frontier.

(C) Any points above IC_3 are strictly preferred to the student's final choice but are unattainable.

(D) The student should try to attain as high a grade as possible.

(12) (UCL-J17-Q4) Suppose the utility function of an individual is given by: $U(x, y) = xy^2$.

Hint: this question requires Calculus. If you are not comfortable with Calculus, use Wolfram Alpha!

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(A) This utility function implies that good y is preferred to good x so the bundle $(2, 1)$ is preferred to $(9, 0.5)$.

(B) The marginal rate of substitution between y and x is $MRS_{x,y} = \frac{2y}{x}$.

(C) The marginal rate of substitution between y and x is decreasing in x.

(D) The marginal rate of substitution between y and x is decreasing in y.

(13) (ECO-U3-Q6) You are a taxi driver in Melbourne who earns $50 for a day's work. You have been offered a one-day ticket to the Australian Open for $40. As a tennis fan, you value the experience at $100. With this information, what can we say? _____

(A)   The opportunity cost of the day at the Open is $40.

(B)   The economic cost of the day at the Open is $40.

(C)   The economic rent of the day at the Open is $10.

(D)   You would have paid up to $100 for the ticket.

(14) (OUP-U6-Q15)   The   figure   depicts   the   efficiency   wage   equi-
librium   of   a   worker   and   a   firm.   According   to   this   figure:
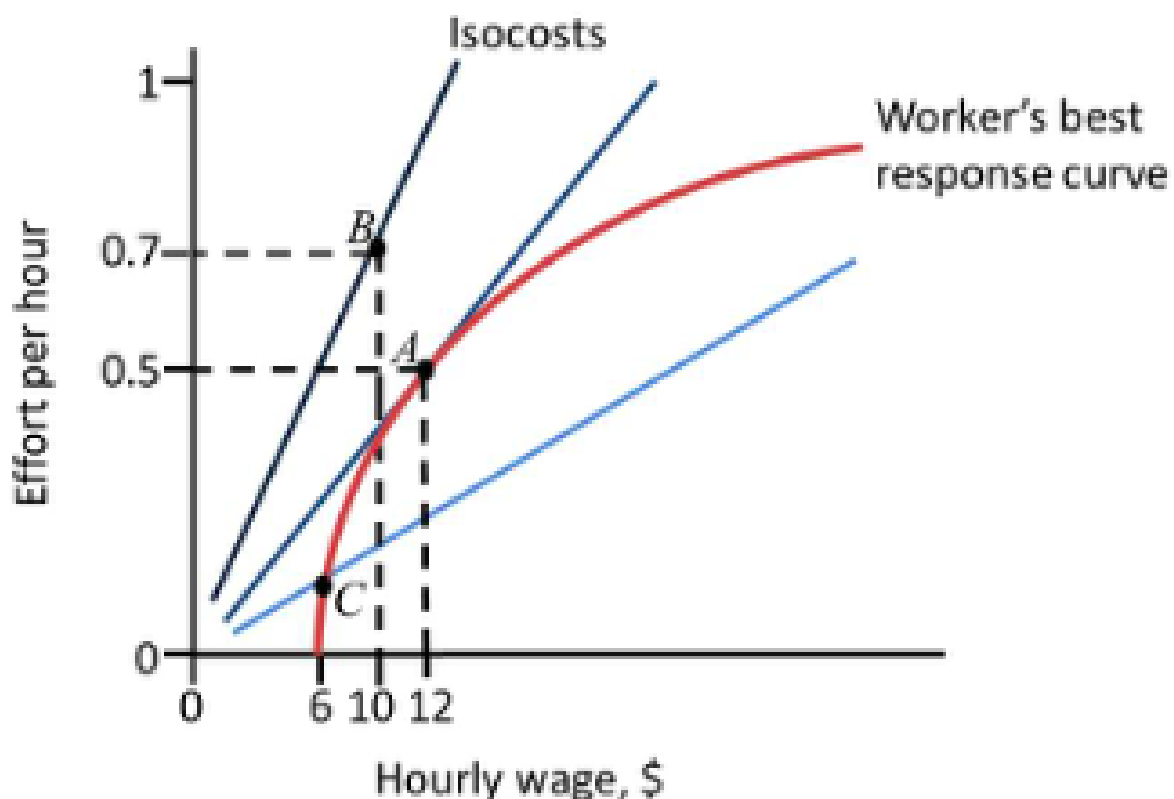
(A)   At C, the marginal rate of substitution (MRS) between higher wage cost
and higher effort exceeds the marginal rate of transformation (MRT).

(B)   At B, the MRS is higher than the MRT.

(C)   The firm would maximise its profits by paying an hourly wage that is $6
above the worker's reservation wage.

(D)   The firm is able to increase its profits from those attained at A by inducing
the worker to exert higher effort in return for a higher wage.

(15) (TEA-U6-Q4) The figure below depicts the effect of an increase in the unemployment benefit on the workers' best response curve, when the unemployment rate is 12%. Which of the following statements is correct following a rise in the unemployment benefit, ceteris paribus?

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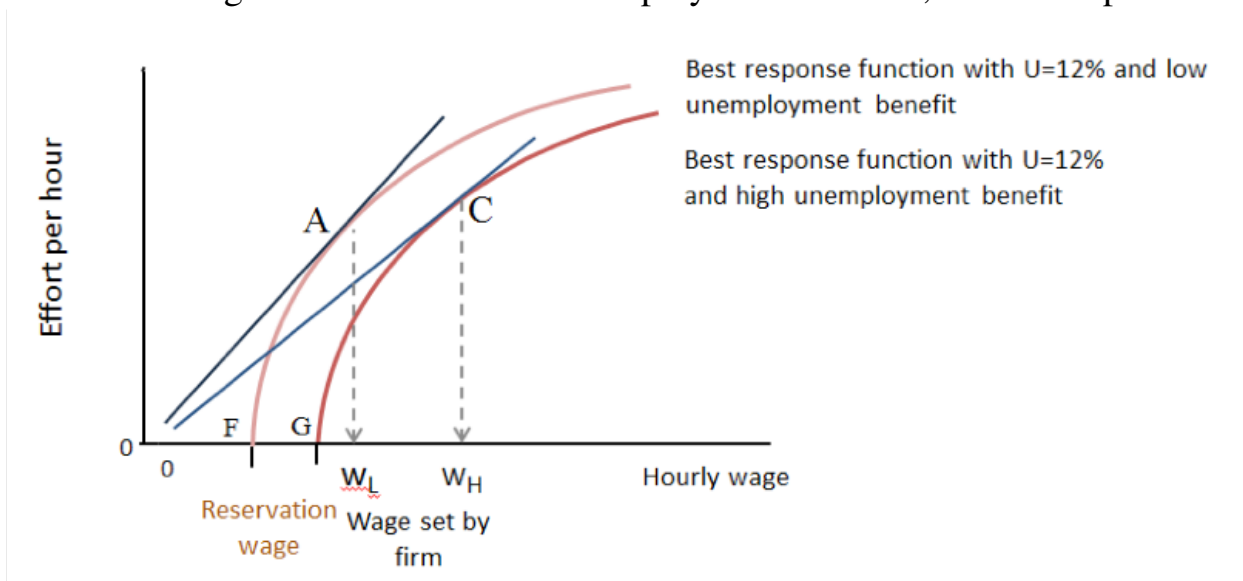
(A)   The firm's profit level falls.

(B)   The workers' reservation wage falls.

(C)   The efficiency wage at any given level of employment falls.

(D)   The firm sets a lower efficiency wage.

(16) (UCL-S17-Q6) Clark and Oswald (2002) estimate that 'the average British person would need to be compensated £15,000 ($22,500) per month after losing their job in order to be as happy as they were when they were employed.' Based on this information, which of the following statements is correct?

Hint: this question is not asking you to find and read Clark and Oswald (2002). With merely knowledge on employment rent, you are able to answer this question. _____

(A) This evidence favours the interpretation of unemployment as voluntary.

(B) This is less than the estimated loss of earnings of an average worker who became unemployed at that time.

(C) This evidence is an indicator that employment rents are non-negligible.

(D) This evidence shows that the motivation for worker to work with effort is the work ethic

(OUP-U6-Q14)

The figure depicts the isocost lines of a firm. Which of the following statements is correct?
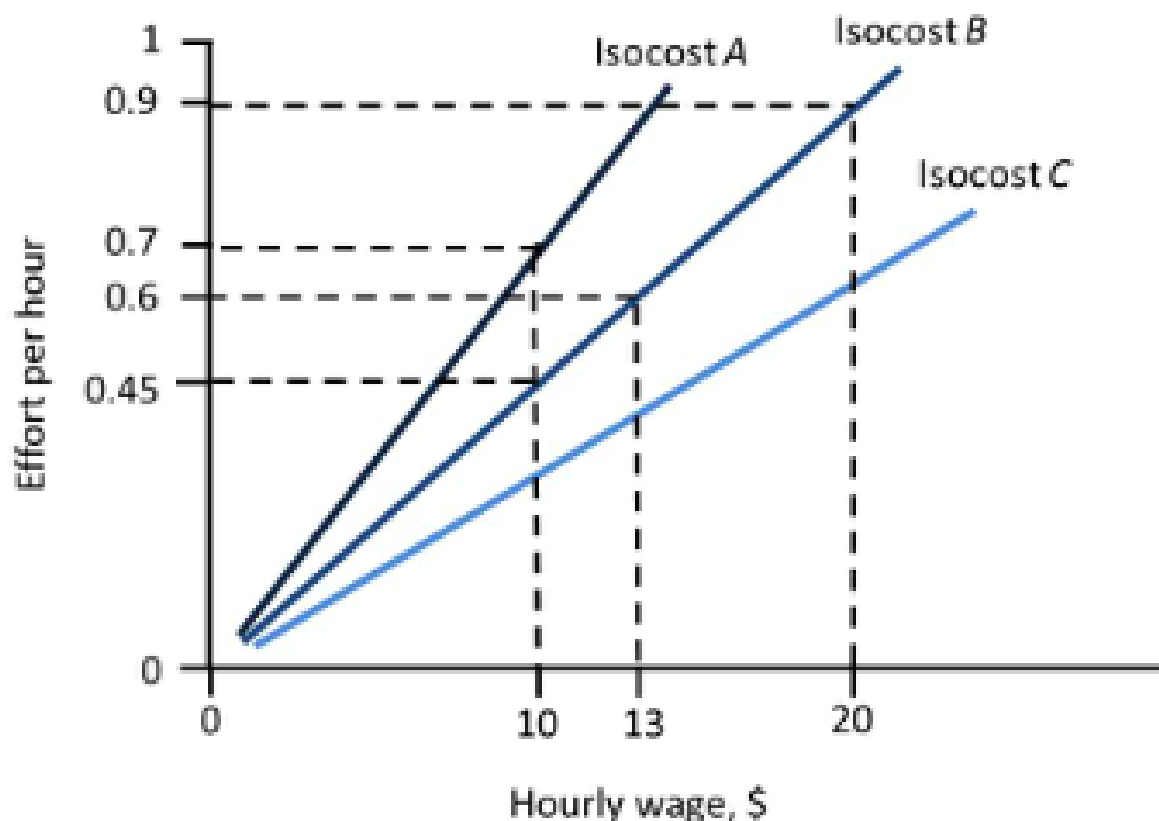
(A) The cost of production is constant along an isocost line.

(B) Isocost A has the lowest cost per unit of effort of the three isocosts.

(C) The units of effort per dollar of wage cost for isocost B are 0.45.

(D) For the hourly wage of $12, the effort per hour is 0.8 on isocost A.

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(18) (OUP-U6-Q10) Consider an employee with a reservation wage of $6 an hour. The employee chooses an effort level between zero and one. Which of the following statements regarding her best response curve is correct? _____

(A)   The best response curve describes the effort that the employee would choose for each level of the hourly wage.

(B)   The best response curve is upward-sloping and convex.

(C)   The curve crosses the horizontal axis at the origin.

(D)   The average effort per hour is increasing in wages.

(19) (OUP-U7-Q14) The following table shows the total cost (TC), average cost (AC), and marginal cost (MC) of a firm for different outputs Q. Which of the following numbers correctly fills in the corresponding letter in the table?

*Hint:* All three rows, TC, AC and MC are continuous lines with Q on the x-axis.

Q	2	3	4	5	6	7	8
TC	128	(a)	184	245	336	463	
AC	64	49	46	(b)	56	66	(d)
MC		37	61	91	(c)	169	

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(A)   156

(B)   43

(C)   130

(D)   79

(20) (OUP-U7-Q25) Which of the following statements regarding the cost structure of the film (movie) industry is correct? _____

(A)   The marginal cost of producing additional copies of a film is high.

(B)   The price is above marginal cost due to lack of substitutes.

(C)   Industry regulators should cap the price of a DVD at its marginal cost.

(D)   The quantity sold in the film industry is inefficient.

(21) (UCL-S16-Q4) Demand faced by a monopolist is $Q = 20\text{–}0.5P$. Her marginal cost is 10. Based on this information we can say that: _____

(A) The optimal production of the monopolist is Q = 15.

(B) The price charged by the monopolist is equal to her marginal cost.

(C) The deadweight loss associated with the monopolist's choice of price is less than the product of the difference between her price and marginal cost, multiplied by her optimal quantity.

(D) If instead of a monopolist, the market is under perfect competition, then the optimal production of this tiny firm would be Q = 7.5 .

(22) (OUP-U9-Q4) The figures depict the wage-setting curve and how it is derived using the best response function of the employees and the isocost lines for effort of the employers. U_1 and U_2 are unemployment rates. Which of the following statements is correct?
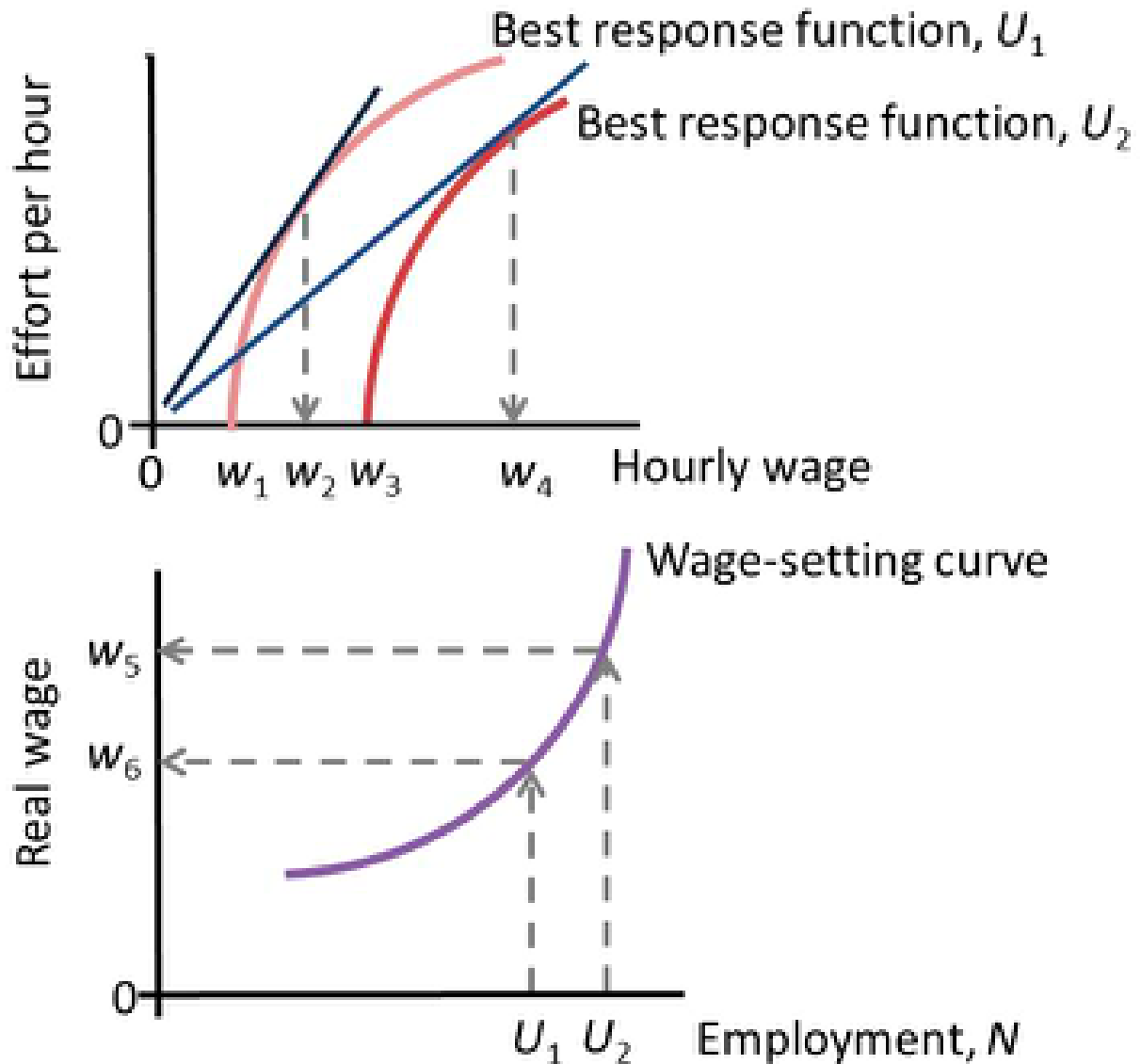

(A) w_2 is the reservation wage when the unemployment rate is U_1.

(B) $w_5 = w_3$.

(C) $U_1 < U_2$.

(D) w_5 is the Nash equilibrium wage when the unemployment rate is U_2.

(23) (OUP-U9-Q21) The figure depicts a labour market. Now consider an inflow of half a million immigrant workers who are all looking for employment (rather than intending to start up a business). Which of the following statements is correct?
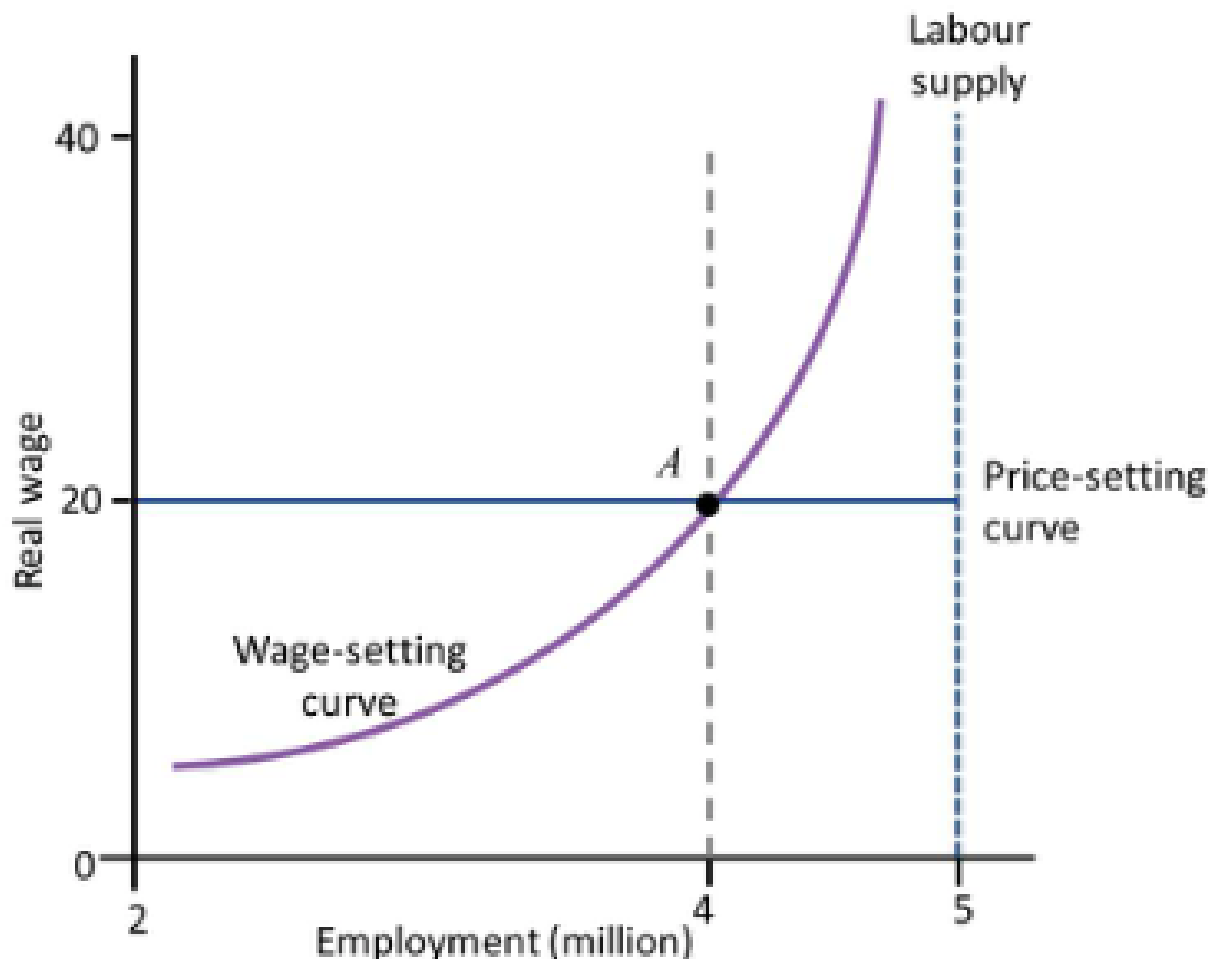
(A)   Unemployment doubles initially.
(B)   The wage-setting curve temporarily shifts down.
(C)   The firms' marginal cost of production is temporarily reduced.
(D)   All immigrants find work.

(24) (ECO-U9-Q11) Figure 9.20 depicts the effect of union wage-setting. What can we conclude from this figure?

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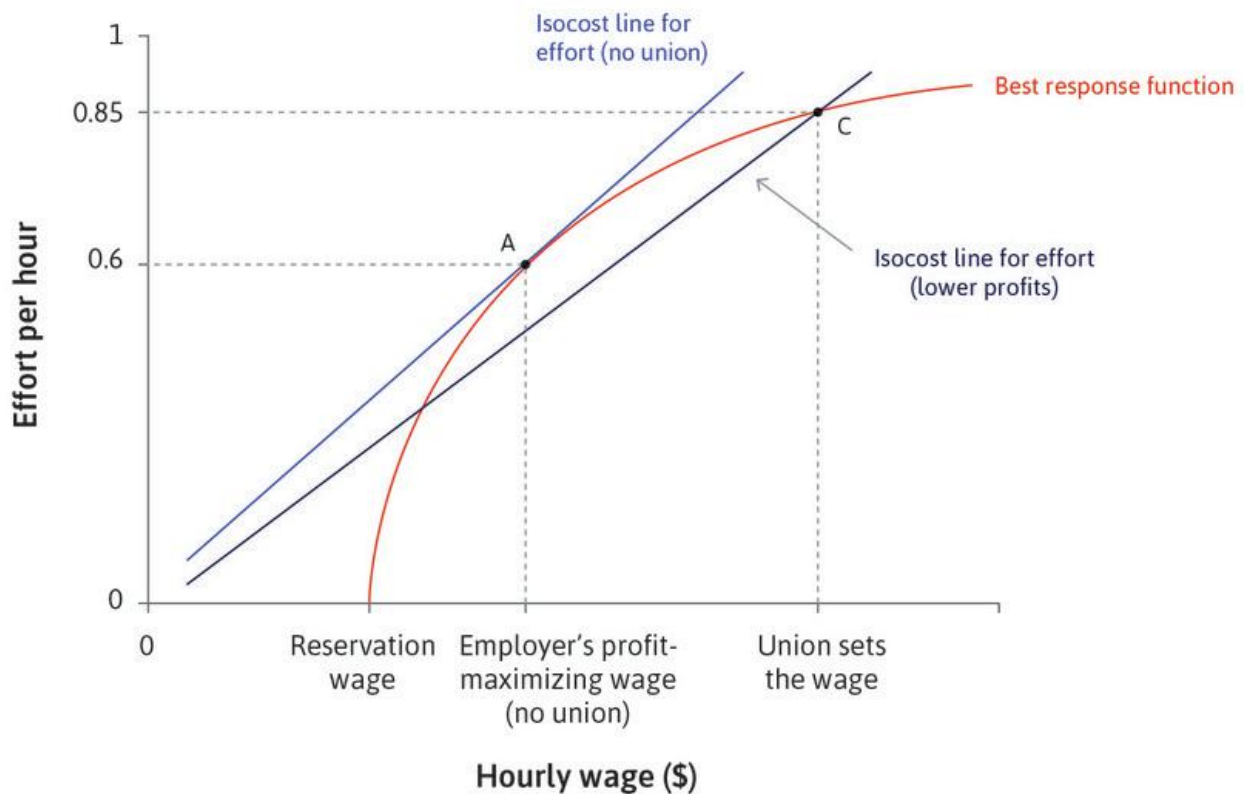
(A) Compared to A, at C the effort per hour is higher and therefore the firm's profit is higher.

(B) The resulting bargained wage-setting curve will be above the wage-setting curve with no union.

(C) The effect of a strong union will always be to increase unemployment.

(D) Under union wage-setting, the firm is still setting the wage that maximizes its profits.

(25) (OUP-U10-Q3) Ms. Moneypenny's wealth depreciates at £5,000 a year. Her net annual income is £25,000. She will spend 40% of this net income on an extension on the house, another 40% on general consumption and save the remaining 20% in a pension fund. The tax rate is 40%. Based on this information, which of the following statements is correct? _____

(A)   Her annual disposable income is £20,000.

(B)   Her before-tax income is £50,000.

(C)   Her investment is £5,000.

(D)   She pays a tax of £12,000.

(26) (OUP-U10-Q5) Consider Esther's intertemporal choice of consumption (c_1, c_2), where c_1 and c_2 are the consumption level in periods 1 (horizontal axis variable) and 2 (vertical axis variable), respectively. You are given that her preferences exhibit diminishing marginal returns to consumption. Which of the following statements is correct?

Hint: Usually indifference is convex.

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(A) If Esther is willing to substitute €1 of c_1 for €5 of c_2 when c_1 is €5, then she would be willing to substitute €1 of c_1 for more than €5 of c_2 if c_1 was €10.

(B) Esther's indifference curves are concave.

(C) Esther's marginal rate of substitution is decreasing in c_2.

(D) Esther prefers similar amounts of c_1 and c_2 compared to the extreme cases of consuming all of her income as c_1 or c_2.

(27) (OUP-U10-Q10)

The diagram depicts Marco's choice of consumptions in periods 1 and 2. He has $100 worth of grain in period 1 and no income in period 2. Marco has two choices. In scheme 1, he can store the grain that he does not consume in period 1. This results in a loss of 20% of the grain due to pests and rotting. In scheme 2, he can sell the grain that he does not consume and lend the money at 10%. Which of the following statements is correct?
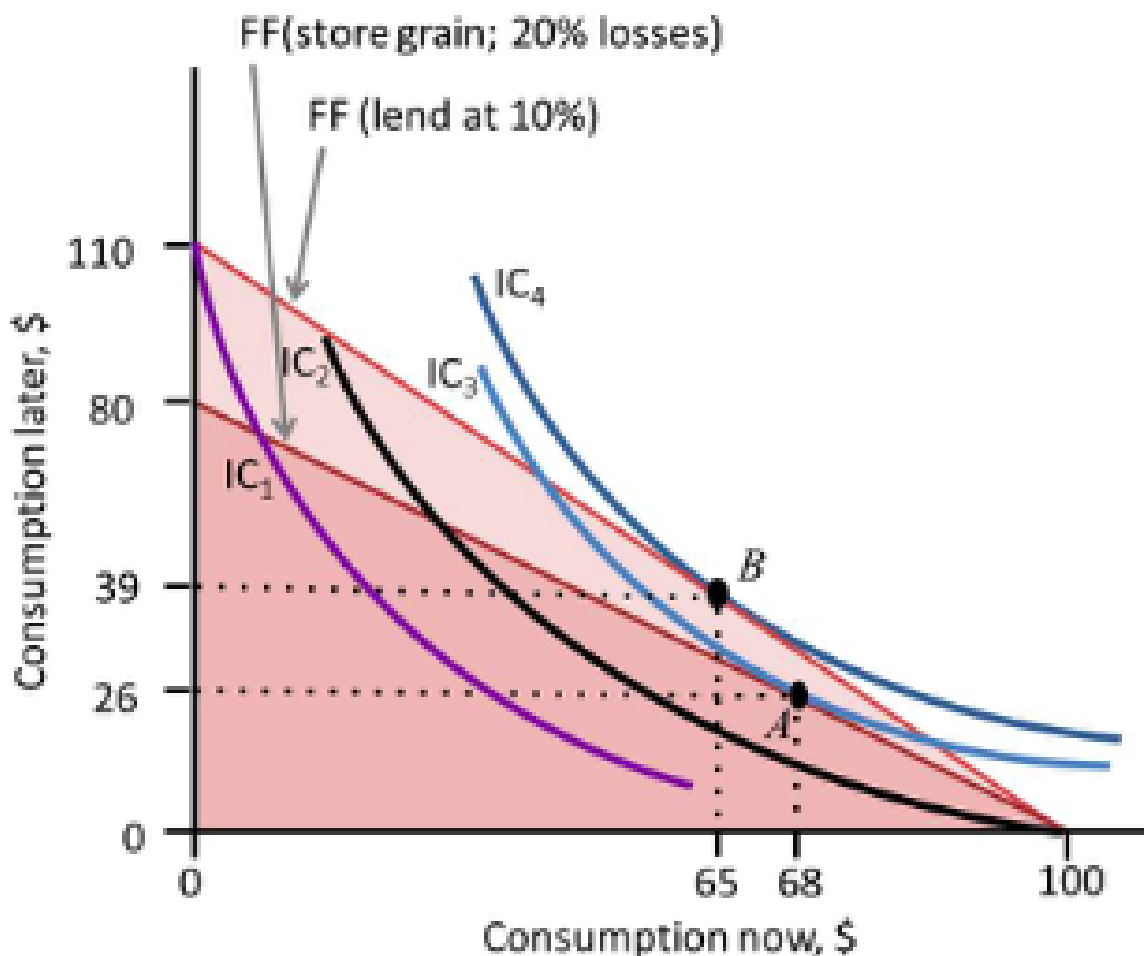
(A) IC_1 is Marco's reservation indifference curve.

(B) Storing some of the grain is beneficial for Marco, despite the loss due to pests and rotting.

(C) At A, Marco loses $26 worth of grain to pests and rotting.

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(D)   As Marco can earn 10% interest with scheme 2, his best option is to sell all of his grain and lend.

(28) (OUP-U10-Q22) Which of the following statements is correct? _____

(A) A bank is insolvent if the value of its liabilities exceeds the value of its assets.

(B) The net worth of a bank belongs to its employees.

(C) A loan is secured if it is default-free.

(D) The more a bank holds in cash and reserves, the higher its profits.

(29) (TEA-U10-Q7) Which of the following statements about the banking system is correct? _____

(A) The policy rate is the rate at which the central bank lends to commercial banks.

(B) The policy rate is determined by the supply and demand of the money market.

(C) The bank lending rate is the rate at which the central bank lends to commercial banks.

(D) The spread (markup) represents how the central bank's money is distributed amongst the commercial banks.

(30) (OUP-U10-Q25) In an economy with a population of 100, there are 75 farmers and 25 lenders. The farmers use the funds to finance the planting and tending of their crops. The rate of profit for the harvest is 10%, while the interest rate charged is 6%. Compare the following two cases.

- Case A: All farmers are able to borrow.

- Case B: 40 farmers are credit-excluded.

The Lorenz curves for the two cases are depicted in the figure. Based on this information, which of the following statements is correct?
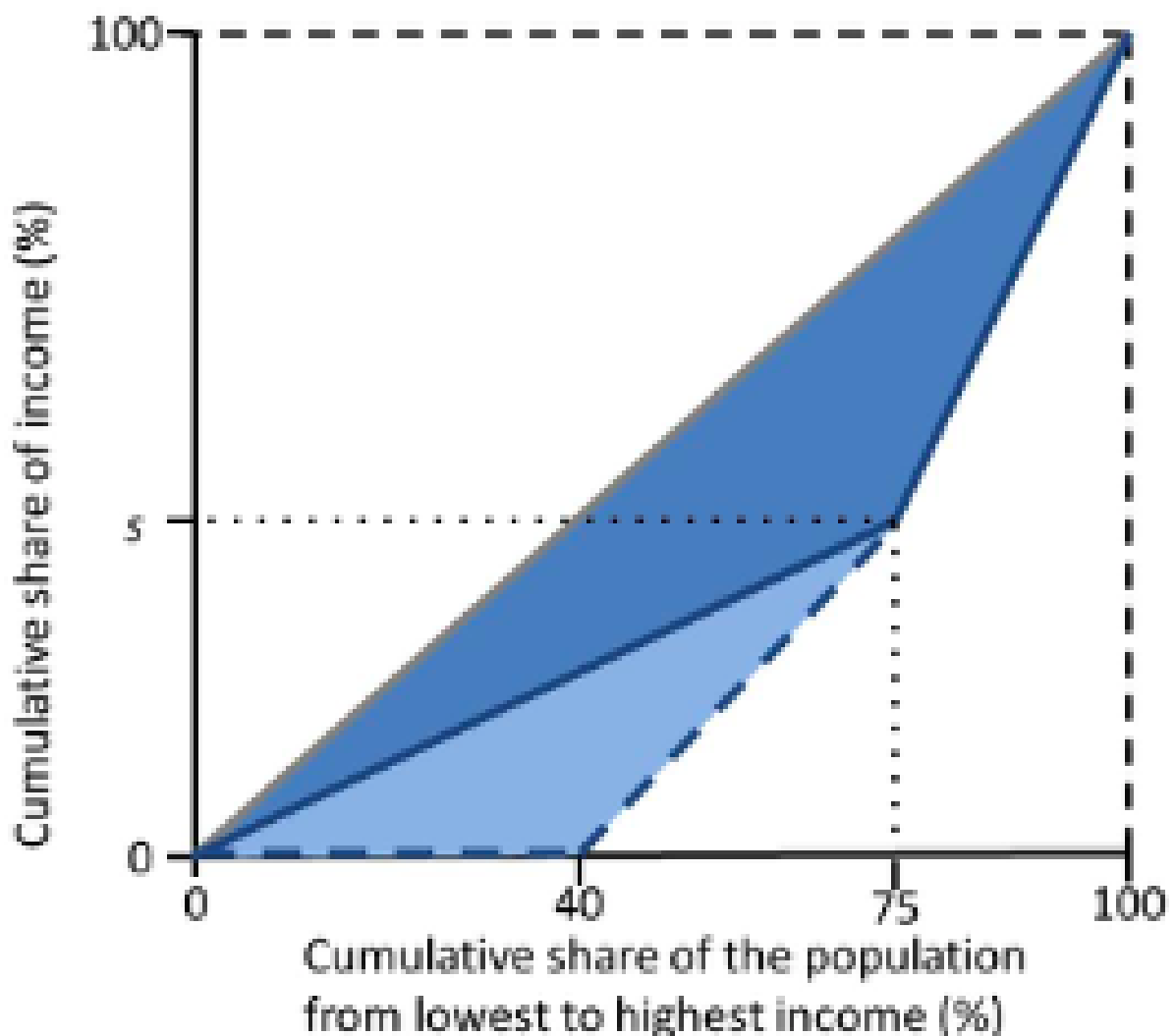
(A)   The lenders' share of the total income is 40%.

(B) $s = 60\%$.

(C)   The Gini coefficient for Case A is 0.4.

(D)   The Gini coefficient for Case B is 0.16 higher than the coefficient for Case A.