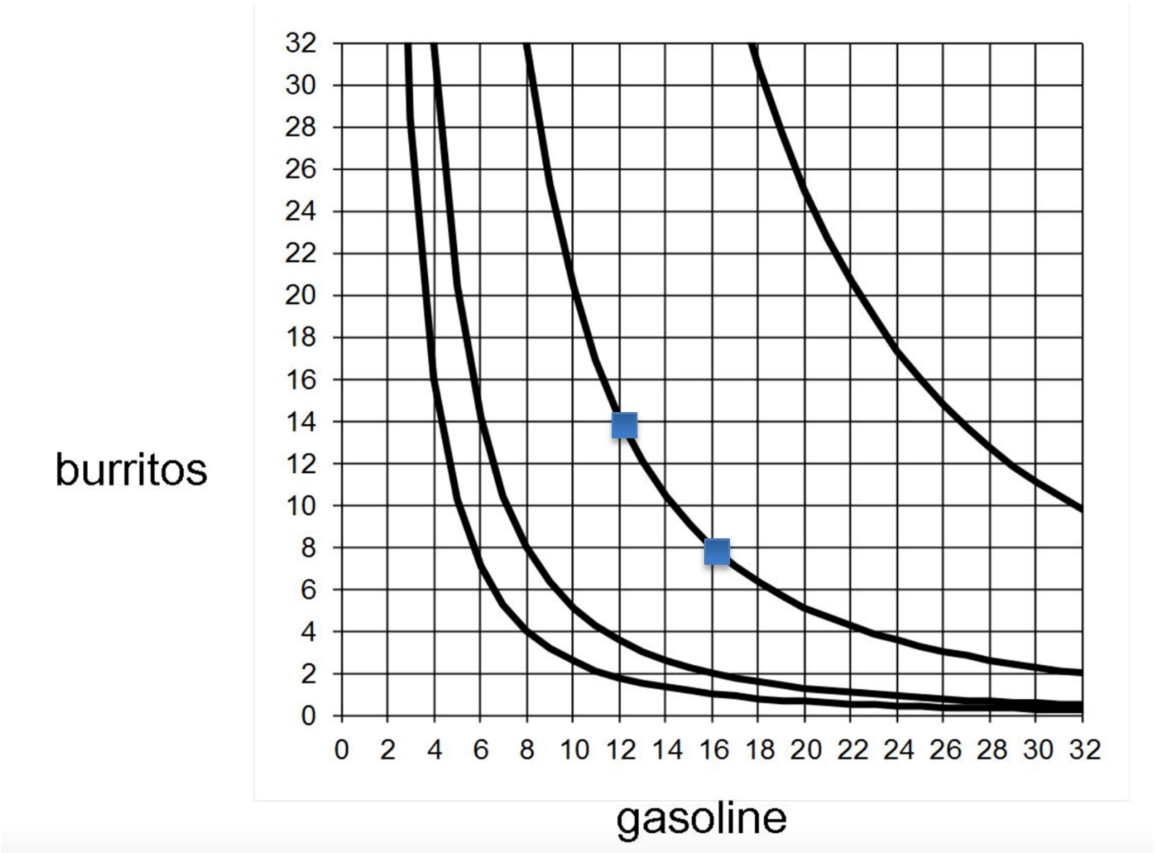
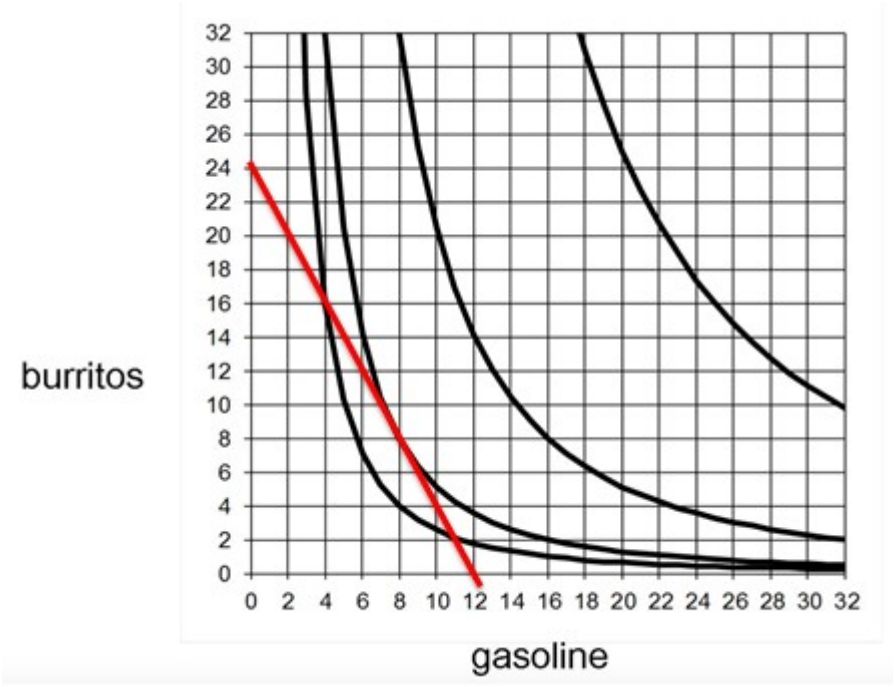
1) This is the Form ID question. For Form A, the answer is A.

2) The agent's indifference curves are drawn below.



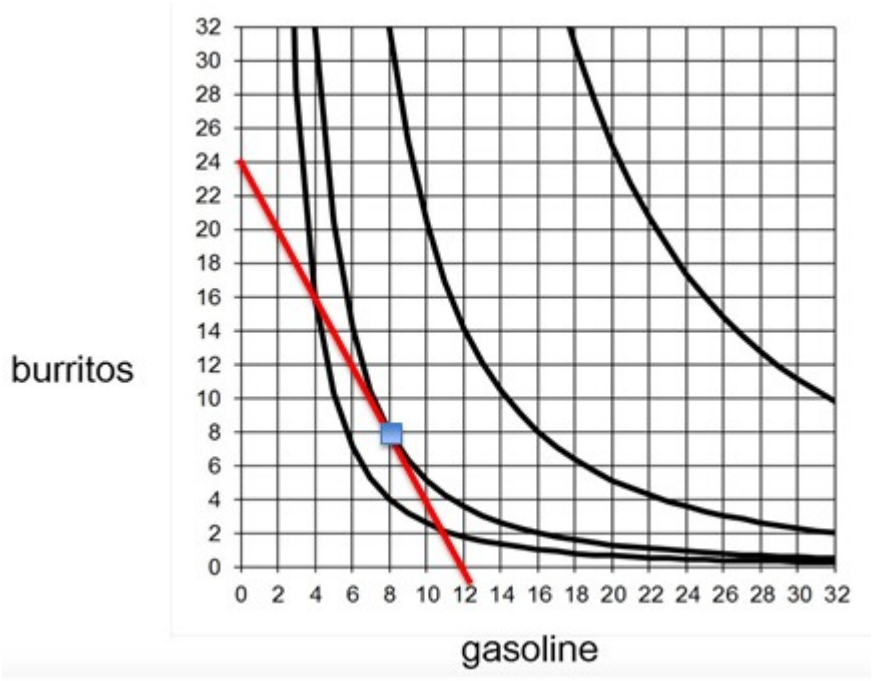
To answer this question, find which option lies on the same indifference curve as the given bundle (16 gasoline and 8 burritos). The option 12 gasoline and 14 burritos lies on the same indifference curve as shown in the figure above. The answer is B.

3)



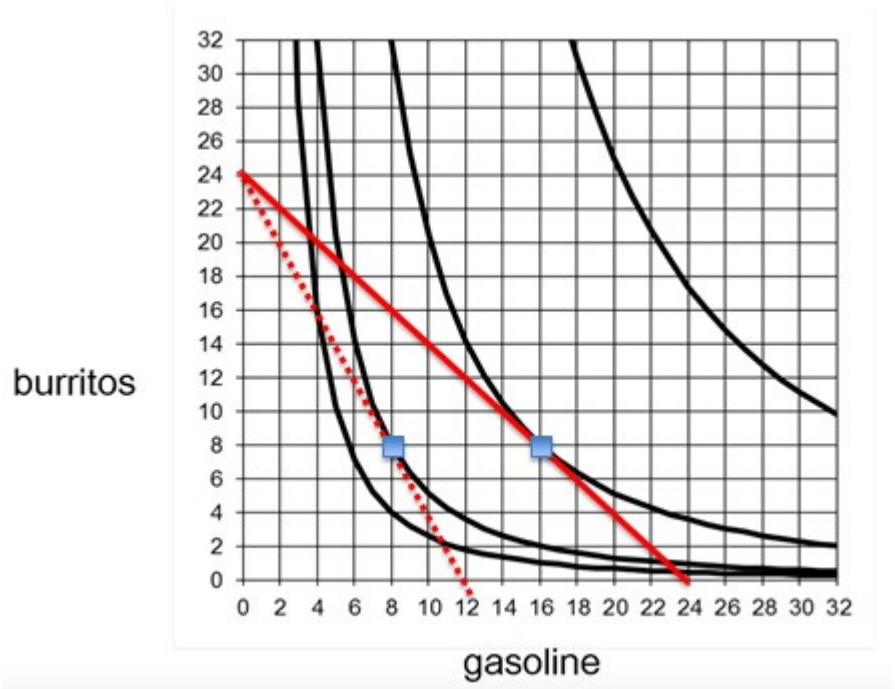
Given the prices and income, the red line above depicts the budget constraint of the consumer. The opportunity cost of gasoline is the amount of burritos the consumer has to sacrifice to consume one more unit of gasoline, which is 2 burritos. The answer is C.

4)

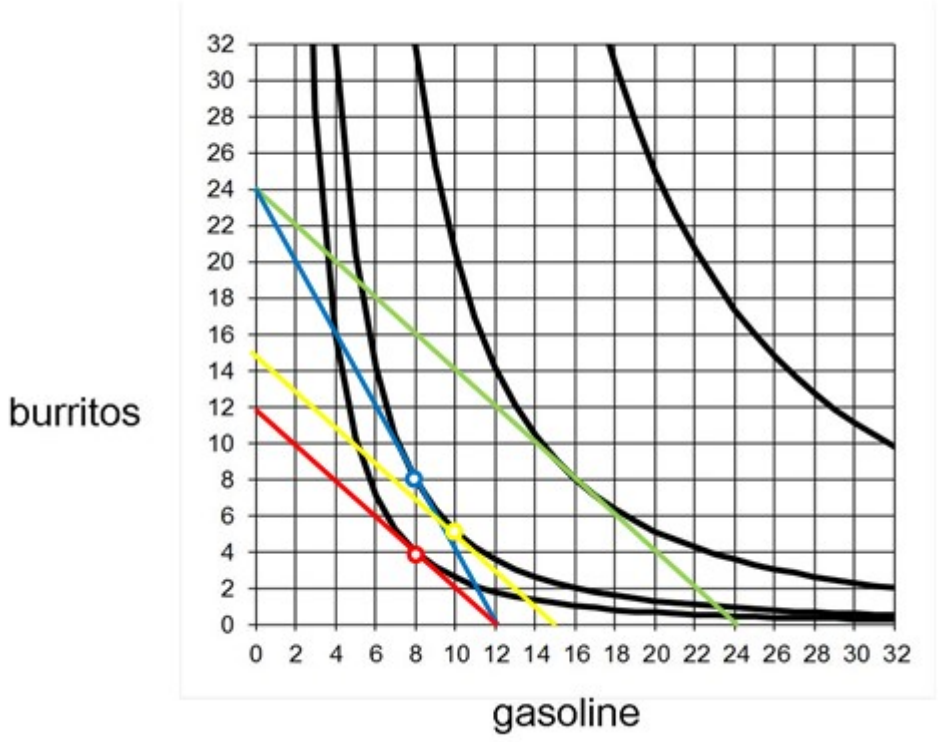


The optimal consumption for this consumer is given by the point of tangency of the budget constraint and the indifference curve. From the figure above we can see this occurs at the point 8 gasoline and 8 burritos. The answer is D.

5)



Before the price change the consumer was consuming 8 gasoline. After the price change the new budget constraint is given by the solid red line. At the new optimal consumption point, the consumer consumes 16 units of gasoline. Thus the total effect or the change in consumption of gasoline is 16-8=8 units. The answer is C.



6) Cornhusker's budget constraint with an income of $120 and the initial prices Pgasoline=$10 and Pburritos=$5, is shown as the blue line above. When the price of gasoline decreases from $10 to $5, Cornhusker 's budget constraint changes to the green line. In order to calculate the substitution effect of the price change, draw a parallel line to the new constraint (green line) in yellow. Notice that the intersection of the parallel line and utility curve is at the yellow point with 10 gasoline and 5 burritos. Before the price change, demand for gasoline is given by 8 units (see the blue point above). Therefore, the substitution effect of the price change on demand for gasoline is 10-8=2 units. The answer is B.

7) Cornhusker's new income is $60 and Pgasoline=$5 and Pburritos=$5. Cornhusker's budget constraint is given by the red line and optimal consumption bundle is given by the red point with 8 gasoline and 4 burritos. Before the change Cornhusker consumed 8 gasoline and 8 burritos and therefore is worse off. The answer is B.

8) Let's consider each statement individually:

(i) FALSE. MC will be less than ATC at all quantity levels if and only if ATC falls at all quantity levels. With this cost structure, we likely to have a monopoly and not perfectly elastic industry supply curve.

(ii) TRUE. This is to ensure that all firms have the same cost curves (i.e., a firm is more costly when it has worse technology.). This is necessary because all firms will then have the same profit-maximizing price (min(ATC)), which gives the price of the LR supply curve.

(iii) TRUE. There cannot be barriers to entry because in the LR, the industry's supply adjusts to change in demand by changing the number of firms, not changing the amount of production within each firm.

(iv) FALSE. The supply curve for the individual firm is the MC curve. We don't require it to be unit elastic.

(v) TRUE. This is similar to (ii). This ensures that cost curves of firms do not change as the number of firms in the industry increases.

The answer is D.

9) Recall that TC = FC+VC and dividing both sides by Q, we get that ATC = AFC + AVC. This implies that AFC= ATC –AVC. This is true for any quantity Q. You can pick any Q and figure out AFC and FC. For example, pick Q=2 we see that ATC = 11 and AVC = 3. This implies that AFC = 8 at Q=2. Since AFC =FC/Q, this implies 8=FC/2, and hence FC =8 x 2=16. Note that we could have computed FC at another quantity, for example at Q=4. There ATC = 9, AVC =5 and so AFC = 4. Hence FC = AFC x Q = 4 x 4 =16 as well. The answer is E.

10) In the long run, profits are driven to zero. Looking at the left graph, this happens when P = min ATC, which is 9 for these cost curves. The answer is E.

11) If a firm produces, it will always produce the quantity such that P = MC. When the price is 9 as we found in question 10, the marginal cost is 9 at q = 4. The answer is C.

12) We know that the long run price is 9 from question 10. From the right graph, quantity demanded at P = 9 is 600. For this to be an equilibrium, it must be that the quantity supplied is also 600. Alternatively, the long run supply curve is flat. Drawing a flat supply curve at P = 9, it intersects the demand curve at Q = 600. The answer is E.

13) The industry quantity, Q, is 600 from question 12. Since we showed in question 11 that each firm produces q =4, N = Q/q = 150. The answer is C.

14) In the short-run, the number of firms cannot change. Remember, for a competitive firm P=MR, then find short-run supply, since firm quantity is where MR=MC. Then multiply individual firm quantity by the number of firms to obtain economy wide quantity, then we can plot short-run supply and find where it intersects D2. The answer is B.

15) Profit is (P-ATC)*q. Then firm profit after the shift is (5-11)*2=(-6)*2=-12. The answer is A.

16) In the long-run, price will return to 9, thus does not change after the shift of Demand compared to the shift down to 5 in the short-run, thus short-run shifts more. In the short-run quantity becomes 300, whereas in the long-run, quantity shifts to approximately 200, thus short-run shifts less. The answer is D.

17) Since price with trade is lower than in domestic equilibrium, then demand quantity at the new price of 2 will be larger than supply quantity, thus they will import. The difference between quantity supplied and quantity demanded at a price of 2 is 8-5=3. The answer is E.

18) Without international trade consumer surplus was AEG, and with international trade the new consumer surplus is AKN. Therefore the change in surplus is EGNK. The answer is C.

19)The equilibrium price of a widget inside Econland must be such that the profit of importing a widget (that is, the price of a widget inside minus the world price of 2) is equal to the price of selling the quota. Since the quota is for 2 units, the equilibrium price of the quota must be 1. Therefore, the equilibrium price of a widget inside Econland is equal to 3. The answer is C.

20) Clearly, both a banana and timber from unregulated forest are examples of a rivalrous good. For each of these goods, the consumption of it prevents the simultaneous consumption by other consumer. The answer is C.

21) A public good is defined by both properties nonrivalrous in consumption and non excludable. The answer is D.

22) In class, we discussed that taxation could be an efficient way to reduce carbon emission, but it is not a politically popular thing. Cap and trade is a policy that brings the same level of efficiency as taxing, but may be more acceptable than a taxation, especially if allowances are given to groups that would have lobbied against a tax. We also discussed the use of cap and trade for carbon in Europe and sulfur dioxide in the United States. The incorrect statement in this question is that a cap and trade policy is a command and control policy, since the cap-and-trade is market based. The answer is D.

23) Based on what we learned from before the first midterm, a tax is a wedge that goes from the demand down to the supply. If we would like the poor country to go from consuming 8 units to 6 units, a wedge of $2 must be placed in between the demand and supply (private marginal cost). Therefore, the tax must be equal to $2. The answer is E.

24) Just as in the previous question, we want to find the length of the wedge between the demand and supply (private marginal cost) such that the quantity that corresponds to where the wedge is would be 12 units. This happens when the tax wedge has a length of $4, which means the tax must be equal to $4. The answer is E.

25) The easiest way to find the answer to this question is to pick one of the possible answers, and then see whether that tax rate would give a total world consumption of 18 units. At a tax of $3, the rich country's consumption is 13 units, and the poor country's consumption is 5 units. This implies that at $3, the total world consumption is 18 units, which is what we were looking for. The answer is E.

26) Because the market for allowances is global, there must be one price of allowances in both countries. It is given that the rich country was given 12 allowances and the poor country given 6 units. This corresponds to allowance prices of $4 in the rich country and $2 in the poor country. Thus, the rich country would want to buy permits from the poor country, since it is cheaper. The rich country will buy one permit from the poor country so they can consume 13 units, and the poor country, after selling one permit, will consume 5 units. At this level of consumption for both countries, the value of one permit is the same globally at a value of $3. Therefore, the answer is B.

27) The market equilibrium quantity is the one that equates Demand and Supply i.e. at what quantity in the graph demand and supply will cross. The social efficient quantity is the one that equates social marginal benefit with social marginal cost i.e. at what point in the graph SMB and SMC will cross. Both cross when quantity is equal to T. The answer is D.

28) The social efficient quantity is U. The market quantity without intervention is T. Since U is larger than T we need a subsidy. The government hast to provide a subsidy such that producers want to be at point E and consumers at point N. The answer is A.

29) Peter can make more donuts and more pizzas per hour, therefore Peter has the absolute advantage on both goods. The answer is A.

30) For Peter, the opportunity cost of making a pizza is 2 donuts. For James, the opportunity cost of making one pizza is 2 donuts. Therefore both have the same opportunity cost of producing the goods. No one has a relative advantage over the other in any good. The answer is E.

31) Recall that trade is based on the idea of comparative advantage i.e producers with the lowest opportunity cost in the production of a good should produce that good. Given the new production technology, the opportunity cost for a donut is ½ pizzas for Peter and 5/2 pizzas for James. Likewise, the new opportunity cost in the production for a pizza is 2 donuts for Peter and ⅖ donuts for James. This means that Peter has the comparative advantage in donuts and James has the comparative advantage in pizza. Thus, the answer is B.

32) Using the information in the explanation for 31.), we have that Peter's opportunity cost for making one pizza is 2 donuts and James opportunity cost for making one donut is 5/2 pizzas. Thus, the answer is C.

33) Trade is based on the idea of comparative advantage in order to access new consumption bundles that were initially infeasible. To incentivize trade, the individuals in question must have different opportunity costs which would allow for specialization. Since the opportunity cost for each individual is the slope of the production possibilities frontier, it must be that the production possibilities frontiers are also different. Thus, the answer is B.

34) Recall that a quota is a limit on the number of units of a good that can be imported into a country. We have shown that quota has the same effect as a tariff which limits imports to the same amount as

the quota. Since tariffs raise the cost of buying abroad from the world price to the world price plus a tariff, some consumers are priced out of purchasing the import good while some domestic producers are encouraged to produce. This leads to an increasing producer surplus from increased domestic production and a decreased consumer surplus from the higher world price. Thus, the answer is B.