ECON 3473   Department of Economics
Economics of Free Trade Areas   Atkinson College
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Assignment 1

Part A   Multiple-Choice Questions

To answer each question correctly, you have to choose the best answer from the given four choices.

1. The school of thought during the seventeenth and eighteenth centuries proposing that the way for a nation to become richer was to restrict imports and stimulate exports was :
   A) Mercantilist
   B) Classical School
   C) Laissez Faire
   D) Opportunity cost

2. _____ explains how mutually beneficial trade can take place even when one nation is less efficient than another nation in the production of all commodities.
   A) Mercantilism
   B) The law of comparative advantage
   C) The labor theory of value
   D) The law of absolute advantage

3. _____ states that the true cost of a commodity is the amount of a second commodity that must be given up to release just enough resources to produce one more unit of the first commodity:
   A) Mercantilism
   B) The law of comparative advantage
   C) The labor theory of value
   D) The opportunity cost theory

4. Japan is more efficient in the production of rice, and the United States is more efficient in the production of oranges. In the production of rice, the United States is said to have a(n):
   A) comparative advantage
   B) absolute disadvantage
   C) absolute advantage
   D) comparative disadvantage

5. According to the following table, if the US trades 9 bushels of wheat to the UK for 9 yards of cloth, the US gains from trade will equal:

	U.S.	U.K.
Wheat (bushels/hr)	9	3
Cloth (yards/hr)	5	4

   A) 4 bushels of wheat
   B) 3 yards of cloth
   C) 4 yards of cloth
   D) 5 bushels of wheat

6. According to the following table, the UK can gain from trade with the US by giving up how much cloth for 9 bushels of wheat?

	U.S.	U.K.
Wheat (bushels/hr)	9	3
Cloth (yards/hr)	5	4

   A) Anything less than 12 yards of cloth
   B) Anything greater than 9 yards of cloth
   C) Only less than 5 yards of cloth
   D) Only greater than 10 yards of cloth

7. According to the table below, the opportunity cost of one unit of rice for the US is equal to:

Production Possibility Schedule for Rice and Pudding in the United States and the United Kingdom			
United States		United Kingdom	
Rice	Pudding	Rice	Pudding
140	0	35	0
120	10	30	10
100	20	25	20
80	30	20	30
60	40	15	40
40	50	10	50
20	60	5	60
0	70	0	70

A) 1/2 units of pudding
B) 5 units of pudding
C) 10 units of pudding
D) 2 units of pudding

8. According to the following table, the US has a comparative advantage in:

	U.S.	U.K.
Wheat (bushels/hr)	9	3
Cloth (yards/hr)	6	4

A) Wheat
B) Cloth
C) Both
D) Neither

9. In the table below both countries produce at the bold levels of output without trade. Assume the US and UK initiate trade and begin to completely specialize in the commodity in which they have a comparative advantage. What would the gains from trade be if the US trades 50 units of rice to the UK for 50 units of pudding?

| Production Possibility Schedule for Rice and Pudding in the United States and the United Kingdom | | | |
| United States | | United Kingdom | |
Rice	Pudding	Rice	Pudding
140	0	35	0
120	10	30	20
100	20	25	40
80	**30**	**20**	**60**
60	40	15	80
40	50	10	100
20	60	5	120
0	70	0	140

A) US: 10 units of pudding, 20 units of rice
B) US: 20 units of pudding, 10 units of rice
C) UK: 10 units of pudding, 20 units of rice
D) UK: 20 units of pudding, 10 units of rice

10. _____ cause a nation to give up more and more of one commodity in order to produce each additional unit of another.
A) Increasing opportunity costs
B) Decreasing opportunity costs
C) Constant opportunity costs
D) Costs of production

11. _____ is the amount of one commodity that a nation must give up to produce each additional unit of another.
A) marginal cost
B) marginal rate of transformation (MRT)
C) production frontier
D) marginal rate of return

12. When countries engage in international trade, specialization tends to be:
A) complete with constant costs, and complete with increasing costs
B) incomplete with constant costs and incomplete with increasing costs
C) incomplete with constant costs and complete with increasing costs
D) complete with constant costs and incomplete with increasing costs

13. Nations will have different production possibilities frontiers because of which characteristic?
    A) differences in marginal costs of production
    B) differences in degree of industrialization
    C) differences in factor endowments
    D) differences in community indifference curves

14. A _____ shows the various combinations of two commodities that yield equal satisfaction to the community or nation.
    A) community indifference curve
    B) production frontier
    C) consumption possibilities curve
    D) marginal rate of transformation curve

15. The _____ of X for Y in consumption refers to the amount of Y that a nation is willing to give up to consume an additional unit of X and remain on the same indifference curve.
    A) marginal cost
    B) production frontier
    C) marginal rate of substitution (MRS)
    D) marginal rate of transformation (MRT)

16. A(n) _____ MRS would result in a community indifference curve that is _____ to the origin.
    A) increasing, convex
    B) declining, convex
    C) constant, concave
    D) declining, concave

17. In the absence of trade, a nation is in _____ when it achieves a point of consumption on the highest indifference curve possible, given its production possibilities frontier.
    A) Disequilibrium
    B) Equilibrium
    C) Proportion
    D) none of the above

18. International trade and specialization in comparative advantage goods leads to:
    A) job gains in domestic comparative advantage industries and job losses in industries with a comparative disadvantage.
    B) job losses in domestic comparative advantage industries and job gains in industries with a comparative disadvantage.
    C) job gains in domestic comparative advantage industries and job gains in industries with a comparative disadvantage.
    D) job losses in domestic comparative advantage industries and job losses in industries with a comparative disadvantage.

19. A nation may consume _____ *only* with specialization in production and trade.
    A) inside its production frontier
    B) outside its production frontier
    C) on its consumption frontier
    D) tangent to its consumption frontier

20. Which of the following states that a nation will export commodities intensive in its relatively abundant and cheap factor and that international trade brings about equalization in returns to homogeneous factors across countries:
    A) Heckscher-Ohlin theory
    B) Stolper-Samuelson theorem
    C) Differentiated product theorem
    D) None of the above

21. Which of the following states that free international trade reduces the real income of the nation's relatively scarce factor and increases the real income of the nation's relatively abundant factor?
    A) Heckscher-Ohlin theory
    B) Stolper-Samuelson theorem
    C) Differentiated product theorem
    D) None of the above

22. Assume a nation where labor is mobile between industries but capital is not. The specific-factors model states that trade leads to which of the following?
    A) An increase in the return to capital used to produce the nation's export commodity
    B) An increase in the return to capital used in the nation's import-competing industry
    C) A decrease in the return to capital used to produce the nation's export commodity
    D) An increase in the return to labor used in the production of both imports and exports.

23. According to the specific factors trade theory:
    A) Owners of factors specific to export industries lose when trade takes place, but owners of factors specific to import-competing industries gain
    B) Both owners of factors specific to export industries and owners of factors specific to import-competing industries gain from trade
    C) Both owners of factors specific to export industries and owners of factors specific to import-competing industries lose from trade
    D) Owners of factors specific to export industries gain when trade takes place, but owners of factors specific to import-competing industries lose

24. In his empirical test of Heckscher and Ohlin's model, Leontief found that
    A) the US imported more labor intensive goods and exported more capital intensive goods.
    B) the US imported more capital intensive goods and exported more labor intensive goods.
    C) the US imported and exported more labor intensive goods.
    D) the US imported and exported more capital intensive goods.

25. _____ involves international trade in the differentiated products of the same industry or broad product group.
    A) Inter-industry trade
    B) Intra-national trade
    C) Intra-industry trade
    D) None of the above

26. Which model states that a nation can shift from being a net exporter of a good to a net importer of the same good?
    A) Specific-factors model
    B) Technological gap model
    C) Product cycle model
    D) Real business cycle model

27. Assume that Country A is relatively abundant in capital and relatively scarce in land. According to the factor endowment theory, with free trade, the internal distribution of income in Country A will change in favor of:
    A) Capital
    B) Land
    C) both capital and land
    D) neither capital nor land

28. Assume the cost of transporting computers from US to Japan is greater than the pre-trade price difference for computers between US and Japan. Trade in computers between US and Japan will:
   A) be very profitable for both parties
   B) be a breakeven proposition for both parties
   C) Occur
   D) not occur

29. Some forces that improve upon the inadequacies of the Heckscher-Ohlin model in explaining basis for international trade are:
   A) Economies of scale
   B) Product differentiation
   C) Technological differences
   D) All of the above

30. Which of the following is not an element of the product cycle model?
   A) The implementation of measures to prevent arbitrage
   B) Expansion of production for export
   C) The introduction of the product into the domestic market
   D) Standardization and beginning of production abroad through imitation

Part B   True/ False/ Uncertain Questions

Explain why the following statement is True, False, or Uncertain according to economic principles. Use diagrams and / or numerical examples where appropriate. Unsupported answers will receive no marks. It is the explanation that is important.

B1.

The following table shows how many cars *or* airplanes can be produced with a unit of resources in Canada and Japan. We can conclude that Canada will export cars and Japan will export airplanes, if both countries trade based on the principle of comparative advantage.

Number of Cars OR Airplanes Produced Per Unit of Resources

	Cars	Airplanes
Canada	9	3
Japan	20	4

B2.

According to the specific-factors model, free trade benefits the mobile factors of a nation.

B3.

With the opening of free trade each country *completely* specializes on the good in which she has a comparative advantage.

Part C   Problem Solving Question

Answer all parts of the following three questions

C-1.

Suppose the following table shows how many personal computers (PC) or mainframe computers (MF) can be produced from a given amount of resources in Canada and the U.S.

Output per Unit of Resources

	PC	MF
Canada	6	1
U.S.	20	2

(a) Which country has an absolute advantage in the production of PC's? MF's? Which country has a comparative advantage in the production of PC's? MF's? Why?

(b) Show that "world" production of both PC's and MF's can increase if Canada moves 3 units of resources into MF production and the US moves one unit of resources into PC production. What is the range of possible trade prices for MF's in terms of PC's.

(c) Show that a small (price taking) country with increasing opportunity costs technology need not change its production point to gain from trade, but that if it does, it can gain even more.

C-2.

The following table provides hypothetical data on the productivity of single unit of resource in producing wheat and microchips in both Canada and Japan.

Output per Unit of Resources

	Wheat (tons)	Microchips
Canada	50	20
Japan	2	12

(a) Which country has an absolute advantage in the production of wheat? Of microchips?

(b) What is the opportunity cost of producing a ton of wheat in Canada? In Japan?

(c) Which country has a comparative advantage in the production of wheat? Of microchips?

(d) Suppose that Canada is endowed with 2 units of this all-purpose resource while Japan is endowed with 10 units. Draw each country's production possibility curve. (Assume constant costs).

(e) Suppose that prior to trade, each country allocated half of its resource endowment to the production of each good. Indicate the production and consumption points of each country in the graphs (for simplicity, assume that these are the only two countries in the world).

(f) What is world output of each good?

(g) Indicate the production points of each country after trade, and determine world production levels.

(h) Suppose that the terms of trade are one microchip for one of wheat and that Canada consumes as much wheat after trade as it did before trade. Indicate the post-trade consumption points of each country and each country's imports and exports.

(i) If the terms of trade changed to two microchips for one ton of wheat, which country would benefit? Explain.