ECON 545 Final Exam (Version 1 – Spring 2016)

1. (TCOs A and D) Suppose you are hired to manage a small manufacturing facility that produces Widgets. (30 points)

(Part A) You know that you are operating in a monopolistically competitive market, that is, you are a small part of a large market with many competitors in this market. From data collected on the Widget Market, you know that market demand has recently decreased and market supply has recently increased. Name two shift factors and determinants that could have caused the market demand to decrease and two shift factors and determinants that could have caused the market supply to increase. Also as manager of the facility, what decisions should you make regarding production levels and pricing for your Widget facility? (15 points)

Remember that supply and demand are about the market supply and market demand, which is much bigger than your own company. You are being given data on supply and demand for the whole market and are being asked what effect that has on you as a small part of that market. You want to identify the possible change in market equilibrium price, and possible change in market equilibrium quantity based on the shifts in demand and supply and adjust your own price and quantity to match the market.

(Part B) Now, suppose that the following changes in demand and supply occur: (1) a substitute good goes up in price and (2) the number of suppliers decrease. What decisions will you make regarding production levels and pricing for your Widget facility based ONLY on these changes, for example, do not factor in the changes in part (a) here? (15 points) (Points : 30)

2. (TCO B) Suppose the governor of California has proposed decreasing toll rates on California's toll roads and has presented two possible scenarios to implement these increases. The following are projected data for the two scenarios for the California toll roads. (20 points)

Scenario 1: Toll rate in 2012: $10.00. Toll rate in 2016: $8.00.
For every 100 cars using the toll roads in 2012, 140 cars will use the toll roads in 2016.

Scenario 2:

Toll rate in 2012: $10.00. Toll rate in 2016: $9.00.
For every 100 cars using the toll roads in 2012, 120 cars will use the toll roads in 2016.

(Part A) Using the midpoint formula, calculate the price elasticity of demand for Scenario 1 and Scenario 2. (10 points)
(Part B) Assume 50,000 cars use California toll roads every day in 2012. What would be the daily total revenue received for each scenario in 2012 and in 2016? (6 points)
(Part C) Is demand under Scenario 1 and under Scenario 2 price elastic, inelastic, or unit elastic? Briefly explain. (4 points) (Points : 20)

3. (TCOs C and D) You have been hired to manage a small manufacturing facility whose cost and production data are given in the table below. (20 points)

Workers	Total Labor Cost	Output	Total Revenue
1	$100	50	$150
2	$200	175	$275
3	$300	275	$355
4	$400	355	$425
5	$500	425	$485
6	$600	485	$535
7	$700	525	$575

(Part A) (5 points) What is the marginal product of the second worker?.

(Part B) (5 points) What is the marginal revenue product (MRP) of the fourth worker?

(Part C) (5 points) What is the marginal cost (MC) of the third worker?

(Part D) (5 points) Based on your knowledge of marginal analysis, how many workers should you hire? Explain you answer. (Points : 20)

4. (TCO C) Answer the next questions (Parts A and B) on the basis of the following cost data for a firm operating in pure competition. (20 points)

Output	TFC	TVC
0	$200.00	0.00
1	$200.00	50.00
2	$200.00	120.00
3	$200.00	200.00
4	$200.00	300.00
5	$200.00	450.00
6	$200.00	650.00

(Part A) Refer to the above data. If the product price is $75 at its optimal output, will the firm realize an economic profit, break even, or incur an economic loss? How much will the profit or loss be? Show all calculations. (10 points)

(Part B) Refer to the above data. If the product price is $100 at its optimal output, will the firm realize an economic profit, break even, or incur an economic loss? How much will the profit or loss be? Show all calculations. (10 points) (Points : 20)

5. (TCOs E and F) Discuss structural, cyclical, frictional, and natural unemployment. What fiscal and monetary policies are appropriate to fight unemployment? What type of unemployment will be affected most by these policies? Why? Which will be affected least? Why? (20 points) (Points : 20)

6. (TCO E) Answer Parts A and B completely. (30 points)

(Part A) (20 points) Suppose nominal GDP in 2012 was $100 billion and in 2014 it was $220 billion. The general price index in 2012 was 100, and in 2014 it was 140. Between 2012 and 2014, the real GDP rose by what percent?

(Part B) Use the following scenario to answer questions (Part B1) and (part B2).

In a given year in the United States, the total number of residents is 190 million, the number of residents under the age of 16 is 38 million, the number of institutionalized adults is 15 million, the number of adults who are not looking for work is 27 million, and the number of unemployed is 5 million.

(Part B1) (5 points) Refer to the data in the above scenario. What is the size of the labor force in the United States for the given year?

(Part B2) (5 points) Refer to the data in the above scenario. What is the unemployment rate in the United States for the given year? (Points : 30)

7. (TCOs E and F) Answer Parts A, B, and C completely. (40 points)

(Part A) Suppose your local Congress representative suggests that the federal government intervenes in the gasoline market to stop runaway price increases. Would you say that this view basically supports the Keynesian or the Monetarist school of thought? Why? What position would the opposing school of thought take on this issue? (Be brief—you can answer this in two or three brief paragraphs.) (15 points)

(Part B) Any change in the economy's total expenditures would be expected to translate into a change in GDP that was larger than the initial change in spending. This phenomenon is known as the *multiplier effect.* Explain how the multiplier effect works. (10 points)

(Part C) You are told that 80 cents out of every extra dollar pumped into the economy goes toward consumption (as opposed to saving). Estimate the GDP impact of a positive change in government spending that equals $200 billion. (15 points) (Points : 40)

8. (TCO H) You are in charge of making recommendations based on economic forecasts to upper management of your firm, which produces widgets, and employs 2,500 workers. What would you look for in terms of leading indicators (discuss at least three indicators), and what recommendations would you make to improve performance and promote better decision making based on your findings regarding leading indicators? Be sure to consider the macroeconomic nature of leading indicators, and the microeconomic nature of your firms' decisions. (30 points) (Points : 30)

9. (TCO G) Let the exchange rate be defined as the number of dollars per Japanese yen. Assume there is an increase in U.S. interest rates relative to that of Japan. (30 points)

(Part A) Would this event cause the demand for the dollar to increase or decrease relative to the demand for the yen? Why? (5 points)

(Part B) Has the dollar appreciated or depreciated in value relative to the yen? (5 points)

(Part C) Does this change in the value of the dollar make imports cheaper or more expensive for Americans? Are American exports cheaper or more expensive for importers of U.S. goods in Japan? Illustrate by showing the price of a U.S. e-reader in Japan before and after the change in the exchange rate. (10 points)

(Part D) If you had a business exporting goods to Japan, and U.S. interest rates rose as they have in this example, would you plan to expand production or cut back? Why? (10 points) (Points : 30)