

Econ 311 Section B Midterm

**Part I**

Answer all questions. Unless asked differently in a specific question, please respond as follows. Please state whether the statement is true as written and explain why. Use graphs and equations if they would help your arguments. Each question is worth 10 points.

- a) Per capita income has serious limitations as a measure of international comparisons of economic development.
- b) An increase in the rate of savings in the Solow model, results in an increase in the rates of growth of output per capita, capital per capita and total output.
- c) If there are problems of coordination of economic activity, an economy can remain in a low level underdevelopment trap even when a high level equilibrium is attainable.
- d) In the Lewis model, the supply curve of labor in the manufacturing sector is infinitely elastic.

**Part II**

**Question 1**

Explain the limitations of using market exchange rates in comparing incomes across countries. Why is the purchasing parity measure, superior to the exchange rate based measure?

For the following data, calculate the per capita income of Country A in US dollars using both the exchange rate based method and the purchasing power parity measure. Both countries produce only cars and shoes. The exchange rate is \$1 = 6 units of currency in Country A (which is Dinars).

	Production of		Prices		Population
	Cars	Shoes	Of Cars	Of Shoes	
Country A	100	1000	1000 Dinars	10 Dinars	200
US	1400	300	200 Dollars	10 Dollars	300

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### Question 2

Suppose that there are 10 inhabitants in Country A, where income is distributed as follows in Country A:

Inhabitant	Total Income (LCU) of Each inhabitant		
1	2		
2	5		
3	8		
4	11		
5	14		
6	26		
7	29		
8	31		
9	34		
10	40		

- Draw the Lorenz Curve for this country.
- Assume that the Poverty Gap Ratio is 0.6 and that there are 5 individuals living under the poverty line. Calculate the poverty line and the  $P_\alpha$  measures when  $\alpha=1$  and when  $\alpha=2$ .
- If you were to take 1 unit of income away each from individuals 8, 9 and 10 and give them to individuals 2, 3 and 4 and the poverty line is the same as in (b), calculate the new poverty gap index and the new  $P_\alpha$  measures when  $\alpha=1$  and when  $\alpha=2$ .

### Part III

Write short notes on each of the following topics. Each question is worth 5% of this examination.

- Surplus labor
- Incremental Capital Output Ratio
- Purchasing Power Parity

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Part IV

This part is worth 15% of your examination

The Big Push model illustrates alternative cases where the economy can reach an equilibrium with a higher level of total output with coordinated efforts by modern firms and cases where such an outcome is impossible despite such efforts. Explain with a diagram.

