



commerce  
undergraduate  
society

# ECON 102 (RATNA) FINAL EXAM REVIEW SESSION

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## Introduction:

- Thank you for coming to Commerce Mentorship Program's Review Session for **ECON 102** – customized for Professor **Ratna K. Shrestha**'s session. These materials were prepared by CMP's second-year Academic Consultant **Phuong Vu**, based on Professor Shrestha's curriculum and Ragan Macroeconomics textbook.
- This final exam is CUMULATIVE, covers chapters 19-30 and 34. The term review and practice questions are here to help you to solidify your understanding about ECON 102. Format on the actual exams might include: True/False, Multiple Choice and Long Answers questions (both quantitative and qualitative).
- Besides today's session, I'll hold office hours on **Tuesday, April 25<sup>th</sup>**, from 1-3PM at HA 194. Come find me with any questions you have and I'll be very happy to help out!



## CHAPTER 19 & 20:

### Introduction to Macroeconomics and the Measurement of National Income

1. **Output Gap** =
2. There is two ways to measure changes in price level:

**Rate of Inflation** =

**GDP Deflator** =

3. Unemployment rate measures \_\_\_\_\_.

**Unemployment rate** = \_\_\_\_\_

4. (\*) Interest rate is \_\_\_\_\_, could be measured by \_\_\_\_\_.

5. To measure the contribution of a firm to its total output, we can use the concept of Value Added.

**Value Added** = \_\_\_\_\_

6. GDP measures \_\_\_\_\_.

**GDP (Expenditure)** = \_\_\_\_\_

*Please note that only purchases activities are included in GDP Expenditure, because GDP Expenditure is an estimation of the value of goods and services produced in the economy. For that reason, \_\_\_\_\_ is not included in GDP Expenditure.*

**GDP (Income)** = \_\_\_\_\_  
= \_\_\_\_\_  
\_\_\_\_\_



# CHAPTER 21 & 22:

## Short-run Macro Model

1. **Consumption Function:**

Consumption Function determines the relationship between \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.

2. **Aggregate Expenditure** formula:

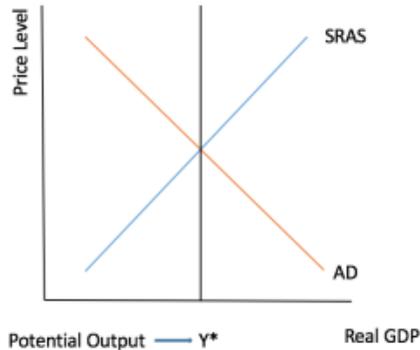
Without Government and Trade	With Government and Trade
$z =$	$z =$
Simple multiplier = $\frac{1}{1 - c}$	Simple multiplier = $\frac{1}{1 - c - m + t}$
$AE =$	$AE =$
	Notes: $c$ stands for _____, $m$ stands for _____, $t$ stands for _____.

3. The Equilibrium National Income condition occurred where \_\_\_\_\_, and is occurred at the intersection of \_\_\_\_\_ and the \_\_\_\_\_.

# Chapter 23 & 24:

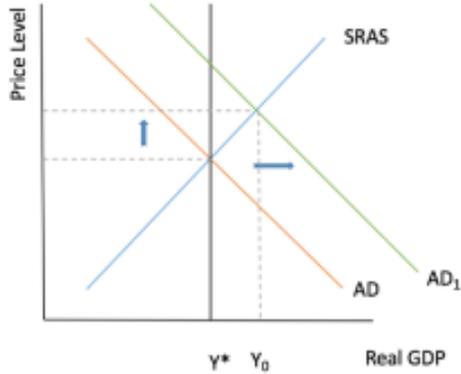
## Aggregate Demand & Supply

The AD/AS model explains \_\_\_\_\_ and \_\_\_\_\_ through the relationship of AD and AS.

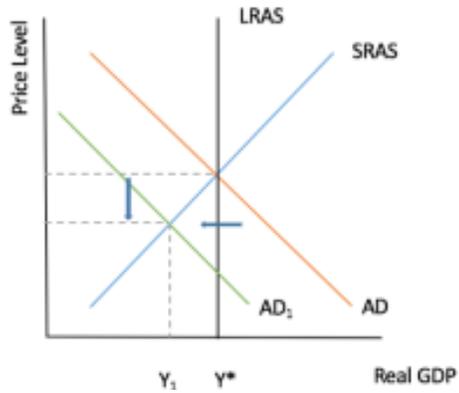


## Aggregate Demand

Expansionary AD Shock:

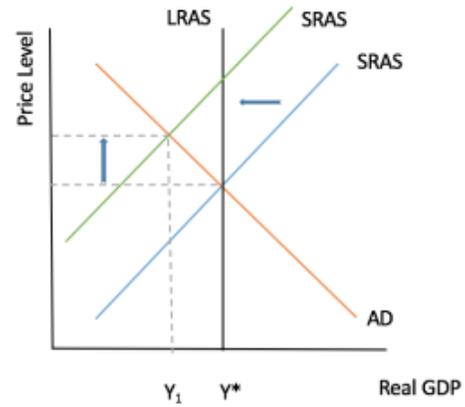


Contractionary AD Shock:



## Aggregate Supply

Example: Negative AS shock.



## CHAPTER 25: GDP Accounting

Given:  $F = \underline{\hspace{2cm}}$ .

$F_e = \underline{\hspace{2cm}}$ .

The GDP Accounting Equation can be written as:

$$\text{GDP} = \underline{\hspace{1cm}} * \underline{\hspace{1cm}} * \underline{\hspace{1cm}}$$



1. Short-run Change in GDP	2. Long-run Change in GDP
- Factor utilization rate:	- Supply of factors:
	- Factor productivity:

## CHAPTER 26: Long-run Economic Growth

**Economic Growth:** \_\_\_\_\_ increases in the level of \_\_\_\_\_ GDP.

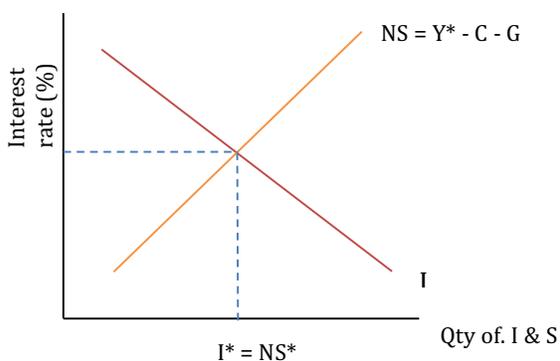
Economic Growth	Labour Force
	Human Capital
	Physical Capital
	Technology Improvement

### Theories of Investment, Savings and Growth.

**In long-run analysis:** Real GDP = \_\_\_\_\_, and \_\_\_\_\_ varies to determine equilibrium.

**In the long run,** saving equals investment. ( $S = I$ ).

$$\begin{aligned} \text{National Savings} &= \text{_____} + \text{_____} \\ &= \text{_____} + \text{_____} \\ &= \text{_____} \end{aligned}$$



- *If national savings supply increases:*

- *If investment demand increases:*



Neoclassical theory of growth:

Neoclassical theory of growth is based on the idea that 4 forces of economic growth can be connected by **The Aggregate Production function**.

$$\text{GDP} = F_T ( L, K, H )$$

This function suggests:

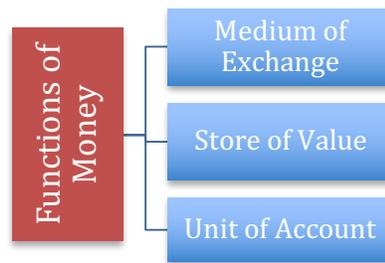
Where:  $F_T =$  \_\_\_\_\_  
 $L =$  \_\_\_\_\_  
 $K =$  \_\_\_\_\_  
 $H =$  \_\_\_\_\_

1. Diminishing marginal returns.
2. Constant returns to scale

Newer growth theories:

1. New knowledge is \_\_\_\_\_.
2. Embodying new technology \_\_\_\_\_.
3. Endogenous technology changes \_\_\_\_\_.

## CHAPTER 27, 28 & 29: Money, Interest and Economic Activity.



Expansion of money from a single new deposit:

Suppose that the bank has a target reserve ratio of  $v$  (%), which means that they want to keep  $v\%$  from all deposits on the bank's reserve and loan the rest:

$$\Delta \text{ in deposit} = \underline{\hspace{2cm}}$$

In the case of **cash drain**, if people want to maintain  $c$  (%) of the cash they deposited into the account, and the bank still has a target reserve ratio of  $v(\%)$ :

$$\Delta \text{ in deposit} = \underline{\hspace{2cm}}$$



Present Value and Interest Rate:

*Cotton the Cat is buying a Government Bond.*

- Face Value = 1000
- Term = 1 year
- Coupon rate = 8%
- Market rate = 9%

$$PV = \underline{\hspace{2cm}} =$$

What if the term is 2 years?

$$PV = \underline{\hspace{2cm}} =$$

*Mr. Grumpy is also buying Government Bond.*

- Face Value = 1000
- Term = 1 year
- Coupon rate = 8%
- Market rate = 9%

$$PV = \underline{\hspace{2cm}} =$$

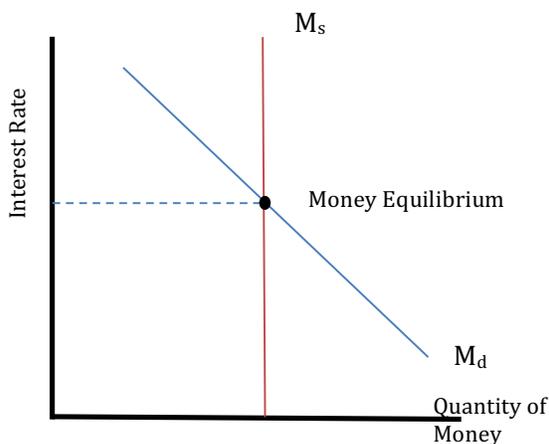
What if the term is 2 years?

$$PV = \underline{\hspace{2cm}} =$$

- If market rate > coupon rate then \_\_\_\_\_ and \_\_\_\_\_.

- If market rate < coupon rate then \_\_\_\_\_ and \_\_\_\_\_.

Money Market:



- *Expansionary monetary policies:*
  
- *Contractionary monetary policies:*

*Factors that influence Md:*

$$M_d = M_d (i^- ; Y+ ; P+)$$

*The monetary transmission mechanism:*

1.  $\Delta$  Interest rate:
  
2.  $\Delta$  Desired Investment and Consumption:
  
3. Change in Aggregate demand:



# CHAPTER 30:

## Inflation & Disinflation

### Overall inflation effects on wages:

$$\text{Change in Nominal Wages} = \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

$$\text{Actual Inflation} = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

When inflation is too high, there is Disinflation. **Disinflation** is the process of \_\_\_\_\_.

**Disinflation Phase 1:** Removing monetary validation.

**Disinflation Phase 2:** Stagflation.

The **cost of Disinflation** is the loss of output that was generated in the process and is measured by **sacrifice ratio**.

$$\text{Sacrifice ratio} = \underline{\hspace{2cm}}$$

# CHAPTER 34:

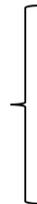
## Exchange Rates and Balance of Payments

### The Balance of Payments:

$$\text{BoP} = \text{CA} + \text{KA} = 0$$



\_\_\_\_\_ acc.    \_\_\_\_\_ acc.



If CA/KA > 0, foreigners owe Canadians

If CA/KA < 0, Canadians owe foreigners

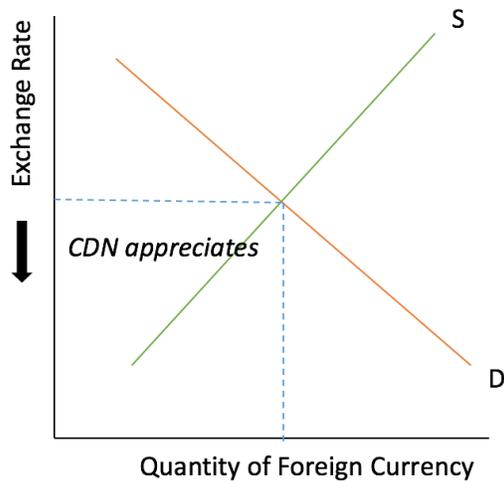
If CA/KA = 0, neither party owed the other



### Exchange Rates:

- When Canadian dollars **appreciate**, exchange rate \_\_\_\_\_. So it takes \_\_\_\_\_ units of domestic currency to purchase foreign currency.
- When Canadian dollars **depreciate**, exchange rate \_\_\_\_\_. So it takes \_\_\_\_\_ units of domestic currency to purchase foreign currency.

### *The Foreign-Exchange Market*



### *Shifts in the foreign-exchange market:*

- When the world prices of a Canadian export increases, it is \_\_\_\_\_ to buy from Canada, hence \_\_\_\_\_ will shift to the \_\_\_\_\_, and eventually, Canadian dollars \_\_\_\_\_.
- When the foreign price of imports decreases, it is \_\_\_\_\_ to buy from Canada, hence \_\_\_\_\_ will shift to the \_\_\_\_\_, and eventually, Canadian dollars \_\_\_\_\_.

**Current Account Deficit:** \_\_\_\_\_ from the rest of the world or \_\_\_\_\_ capital assets to the rest of the world.

In Chapter 34, we learnt the following equation:

$$CA = (S - I) + (T - G)$$

Meaning that changes in \_\_\_\_\_, \_\_\_\_\_ and government budget deficit could cause Account Deficit.

However, current account deficit **is not undesirable at all times**.



## PRACTICE PROBLEMS

***Notes:***

The problems below are aimed to prepare students for long answers/ calculation question in ECON 102 exam. In the second half of today's session will go over some sample Multiple Choice questions on a game-based platform named Kahoot!, and go over the practice problems after that.

Kahoot can be accessed through <https://kahoot.it/#/>, and the Game PIN will be provided during the session.



### 1. *Measurement of National Income and Price Level.*

The vast majority (99.9%) of Country of Many Penguin's population are Penguins Students, so the country consumes 4 goods: Candy, Coffee and Bagels. Details about the good is enclosed in the following table:

	2012		2013		2014	
	Qty	Price	Qty	Price	Qty	Price
Candy	10	1	12	2	7	2.5
Coffee	7	2	19	2	15	2
Bagels	19	1	21	2	17	2

#### Requirements:

- A. *If we use 2012 as the base year, what's the CPI in 2014? How about we set 2013 as the base year? Compare the two CPIs and interpret the difference in the two figures.*
- B. *Using 2013 as the base year, calculate the 2014 GDP deflator and interpret the meaning of this calculation.*
- C. *Continue to use 2013 as the base year, calculate the inflation rate for the year 2014 and interpret this answer. How does inflation rate (obtained from CPI) differ from GDP Deflator?*



**2. Expansion of money from deposit.**

Recently, the BOP (Bank of Penguins) have released these information:

ASSETS		LIABILITIES	
<i>Loans</i>	\$ 220 000	<i>Deposits</i>	\$ 270 000
<i>Reserve</i>	\$ 50 000		

**Requirements:**

- A. *If the Bank of Penguins has lent out all the money that it can, what is its reserve ratio?*
- B. *If the minimum reserve ratio is 4%, how much in excess reserve does the Bank of Penguins now hold? If the bank does not hold any excess reserve, how will its assets and liabilities change?*
- C. *Out of the \$ 270 000 deposited, now people want to hold on to another \$15 000 in cash, and hold another \$20 000 in excess reserve. The minimum reserve ratio is 4%. What is the change in deposit in this situation?*



### 3. *Bonds & Present Value.*

Linda is considering buying a bond issued by Government of Canada. The information includes:

- (1) Face value = \$ 3500
- (2) Coupon rate = 7%
- (3) Market rate = 10%
- (4) Term = 2 years

#### **Requirements:**

**A. Calculate the current price of the bond. Compare the Present Value of the bond to its face value. Using what you learnt from ECON 102, explain why is that the case?**

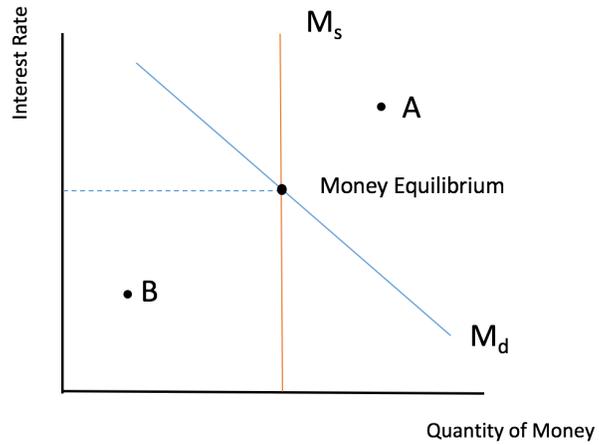
**B. Calculate the yield on this bond. Why do bond yield and market interest normally go on the same direction?**

**C. Linda decided to go and purchase the bonds yesterday. This morning, while reading the news, Linda found out that current market rate jumped to 6%, and she became confused. Help Linda to calculate the current price of a similar bond, and explain to her whether if she should be upset.**



**4. Money demand and supply:**

The diagram below shows the demand for money and the supply of money.



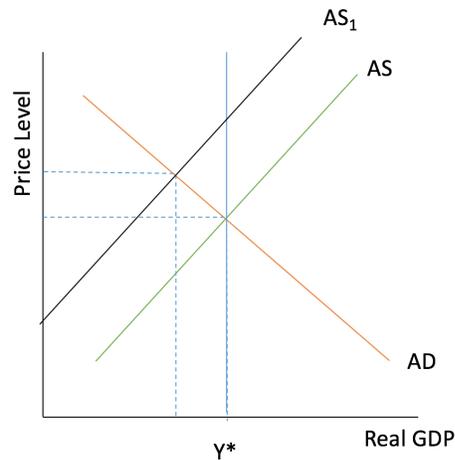
**A. Is it possible for the economy to operate at point A and B? Explain.**

**B. Describe the process to bring an economy with excess money supply back to equilibrium. What about the process for excess money demand?**



## 5. Inflation and Disinflation.

Part A - Consider the following AD/AS graph. Recently, a **contractionary AS Shock** occurs in Country of Many Penguins, shifting aggregate demand to  $AS_1$ ,



A. Explain the initial effect of this contractionary AS shock to the economy. Illustrate your answer on the diagram above.

B. What kind of actions can the Bank of Penguins take to maintain the economy's Desired Output? Explain in words and illustrate it on the diagram above.

C. 1 year after the AS shock, President of Bank of Penguins announced a plan to end the sustain inflation. What is the measure of the cost of this process and how is it calculated, given that the President of BoP wants to reduce inflation by 12% with an Output Loss of \$120m, and potential output of \$720m?

