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CPA

CHARTERED
PROFESSIONAL
ACCOUNTANTS

ECON 102 REVIEW SESSION
SPRING 2015 MIDTERM 1
BY BENJI HUANG



DON'T ASSUME YOU'LL FAIL

HOW TO PASS GATEMAN'S EXAMS:

Assume nothing!

If you have to assume, state your assumptions clearly.

WHEN YOU READ THE QUESTION:

Don't panic. Take a deep breath.

Start by defining the question.

WHEN YOU ARE STUCK:

Move on! The test is long.

Prioritize strengths.

HOW WOULD I KNOW?

I got 100% in his course last year :)

Did I get perfect on every single question? No.

Did I do better than most other people? You bet.

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PART 1 – TERMS (BOLDED WORDS IN THE GBOOK)

Know them ALL. Here are a few to practise:

GDP:

Final market value of all goods and services produced in the economy during a defined period of time

Business cycle:

Fluctuations of actual GDP around potential GDP in wave-like pattern

Inflation:

A rise in the average level of all prices

Fixed investment:

The creation of new plant and equipment

Marginal propensity to save (MPS):

The change in desired saving divided by the change in disposable income that brought it about Or if that is was too complicated....

The amount people save from every addition dollar of disposable income they earn

Aggregate expenditure function:

The function that relates desired aggregate expenditure to GDP

A function's definition has 2 key parts (speed vs. time, mass vs. volume, desired AE vs. GDP)

Non-factor payments:

Output generated income that is not accrued to factors of production

= Indirect business tax – subsidies + depreciation

Fallacy of Composition:

The wrong idea that the aggregate demand function can be obtained by adding up microeconomic demand curves

Frugal economy:

A closed economy with no government where people save and investment is present



PART 2 – CHAPTER 19

1) How is Macroeconomics different from Microeconomics? (4pts)

Macro	Micro
Big picture, deals with aggregates	Divisible down to individuals and firms
Studies general price level vs. national output	Studies price vs. quantity of a specific product
Concerns with business cycles	Short run and long run decisions of each firm
Explains YUPie variables	Often uses YUPie variables as given

2) Explain GDP in detail. (5pts)

Final market value of all goods and services produced in the economy during the period under consideration.

A measure of general economic activity.

Can be measured in nominal and real terms:

Nominal value – measured in today's prices. Nominal GDP is affected by both changes in price as well as changes in output.

Real value – measured in base-period prices. Real GDP is affected only by changes in output.

3) An economist jokingly says, "If my neighbor gets laid off, it's a recession. If I get laid off, it's a depression." Explain what assumptions must be made in order for the economist's joke to be technically correct. Use the terms frictional, structural, and cyclical unemployment. (6pts)

Frictional unemployment occurs due to natural turnover. It exists even when the economy is at potential GDP. Thus it is not a sign of a recession. The assumption must be that neither the neighbour nor the economist are only out of work temporarily.

Structural unemployment occurs when the characteristics of available jobs and workers are misaligned, in which case workers can readily find work if they are willing to relocate or undergo retraining. Structural unemployment is not a sign of a recession. The assumption must be that no one is looking to hire for the type of work performed by the economist and his neighbour anywhere.

In conclusion, the economist is assuming that both he and his neighbour are cyclically unemployed due to a shrinking economy (recessionary gap). Cyclical unemployment is a feature of a recession.

4) In a land far, far away, a kingdom is moving out of a recession after a period of prolonged deep freeze. As you are the royal advisor, the Queen asks you to give a likely explanation as to why the unemployment rate is still rising even though the employment rate has steadily increased. You know that the change in population has been negligibly over the years. (4pts)

Employment rate = (employed) / (total population)

Unemployment rate = (labour force - employed) / (labour force)

Mostly likely, as the economy recovers, more people are actively searching for jobs which leads to an increase in the labour force. However not everyone who is looking for a job can find a job. The rate of increase in the number of employed workers can't keep up with the rate of increase of the labour force.

5) Tom is a student in the U.S.. He observed that shops in the local mall was full to the brim with customers during the weekends back in 2007. He remembered that starting 2008, the number of shoppers began to drop visibly. Later in 2009 some of the stores where there used to be long lineups started to cut down the number of cashiers. This wasn't unique to the local mall either. In 2009, no matter where Tom went, he saw the same changes. Then in 2010, gradually, more customers began to shop regularly at those stores again.

Tom needs help putting his observations into the business cycle framework. (4pts)

2007 was a peak in the business cycle. Economic activity was at the highest in years characterized by the large number of shoppers. Actual GDP was well above potential GDP.

2008 saw the contraction as GDP dropped below potential GDP. Number shoppers began to decrease.

In 2009, GDP reached the trough. Empty checkout lines prompted some stores to reduce the number of cashiers and lanes.

In 2010, economy began to expand again. GDP rose and consumers began to spend more.

Tom would like you to explain what is likely to happen next. (2pts)

In 2010 the recovery was in full swing. Moving into 2011, GDP will likely see more growth as the economy continues to expand.

PART 3 – CHAPTER 20

1) Sally works at an interior BC mining firm as an operations manager. Her monthly salary is \$14,000. Her firm sells minerals to both local and foreign companies. Last month, Sally bought an xPhone 6 from the local Banana Store for \$8,000 (of which \$1,000 is tax). She knows that most of the parts that make up an xPhone come from Taiwan. Sally puts \$6,000 a month into her bank account. The bank lends money to other Canadian companies to help them finance capital projects. Next month, a new highway will be completed that will shorten her driving distance to work. Explain how the story above fits into the Circular Flow of Expenditure and Income. (10pts)

Draw a diagram to help you along if needed:

Events in story	Corresponding flow in diagram
Sally working as a manager	Flow of factor to firm
Sally getting paid	Flow of income to household
Sally buying an xPhone	Flow of output to household
Sally paying for the phone	Flow of expenditure to firm through consumption
Sally paying tax	Flow of taxes to gov't
Gov't building highway	Flow of gov't purchase
Sally putting money into bank	Flow of savings to financial institution
Bank lending money to companies	Flow of investment into the economy
Sourcing parts from Taiwan	Flow of import
Sally's firm selling to foreign companies	Flow of export
Colour: real flow, money flow, injections, withdraws	

2) Is it true that if the real GDP of a country increases, then the nominal GDP must also increase? Explain.* (2pts)

Yes. Real GDP increases when actual production quantities increases, and nominal GDP would increase when either quantities or prices increases or both prices and quantities increase. If real GDP increases, then quantities must go up and so does nominal GDP.

3) Laurence owns a custom skate board manufacturing firm in BC with an annual sales of \$12 million. He tells you, “I am contributing \$12 million every year to the Canadian GDP!” As he was speaking, a truck from a wood supplier arrived at his workshop. You immediately pointed out to Laurence that he made a mistake. What is the mistake? (1pt)

Laurence double counted the value of intermediate goods.

Laurence knows that in order to produce \$12 million worth of skateboards, he incurs a total cost of \$10 million, which leaves him with a \$2 million profit to himself every year. Of the \$10 million in cost, \$5 million are spent on paying craftspeople, \$1 million go to the bank to pay for interests, \$1 million are paid to the gov’t in sales tax, and \$1 million are lost to depreciation. A government grant for sustainable business initiative reduces his cost per year by \$1 million. Calculate a more accurate GDP for Laurence’s firm using the income approach to accounting. (4pts)

GDP = factory income + non-factor payment
= [(craftspeople salary + profit + interest)] + [(tax - subsidy) + (depreciation)]
= (\$5 million + \$2 million + \$1 million) + (\$1 million - \$1 million) + (\$1 million)
= \$9 million

4) Lucy reads a blog: “... Canada is importing \$486 billion worth of goods from foreign countries in 2014. Spending on goods produced in other countries only helps the economy of our trading partners...” Explain to Lucy how imports are accounted for in GDP calculation and why. (2pts)

Imports are subtracted when calculating GDP using the expenditure approach. This is done because Canadian GDP is a measure of the value of the final output generated in Canada. C, G, and I all include imported goods that represent output by foreign countries. This must be subtracted out to arrive at the true Canadian GDP.

5) Jake hears that GDP is not a perfect measure of economic activity. Explain to Jake why it is not a perfect measure. (2pts) Tell Jake in what way is GDP a good indicator of living standard despite being an imperfect measure. (2pts)

There are omissions: illegal activities, underground economy, non-market activity, and economic bad. GDP per capita is a good indicator of living standard. Greater GDP per capita means greater income per person. Omissions exists but they don’t distract from comparisons between countries.

6) How come we do not count the money you put into the stock market as “investment” when we calculate GDP? (2pts)

GDP only counts goods and services that are newly produced. When you buy stocks in the stock market, nothing is produced. So GDP would not change.

PART 4 – CHAPTER 21/22

1) What is on the x-axis and y-axis of an aggregate expenditure function? (1pt) Are they measured in real or nominal terms and why? (2pts)

X-axis is actual GDP, y-axis is desired GDP. Both are real values as opposed to nominal values. The reason is that we are only interested in changes in the quantity of output.

2) Helen would like to know what will likely happen to the marginal propensity to consume as well as the average propensity to consumer when interest rate decreases dramatically and why. (3pts)

When interest rate decreases, people are willing to borrow more to finance big item purchase such as cars. This causes an upward shift in the desired consumption function. As the slope remains the same, MPC remains the same. However AVC increases everywhere along the function.

3) John's family spends about the same amount of money (adjusted for inflation) every year irrespective of the economic condition. Mike takes John's family as an example to refute the Keynesian function of consumption. Mike would likely agree with which other well-known model of consumption and why? (2pts) Is Keynes' function completely wrong? (2pts)

Mike would likely agree to (Friedman's) Permanent Income Hypothesis in which present consumption is function of a household's expected long term income. Temporary fluctuation in income from year to year doesn't affect the family's spending pattern.

Keynes isn't completely wrong because John's family is an extreme. There are families on the other end of the spectrum that spend every penny they make. Those families' present consumption is a perfect function of their current income. The two extremes averages each other out bit.

4) Jane thinks that desired investment provides the key mechanism for stabilizing actual GDP at the equilibrium level. If what Jane thinks is correct, how does desired investment help to push actual GDP towards the equilibrium in an AE model? Assume the case in which $Y > Y^*$. (4pts)

When Y is above Y^* , desired expenditure is below actual output for the period. Spenders spend their desired amount but there are inventories left over unsold. Producers' accumulated inventory (a component of their desired investment) thus increases. Producers, in an attempt to get back to the original desired level of investment, will reduce output and let the inventories sell without replenishing. This results in a decrease in actual GDP until Y becomes Y^* .

5) Explain why governments might not wish to reveal the worst possible outcome of an on-going recession to the public. As a matter of fact, governments often project very optimistic outlooks. Why? (5pts)

This has to do with the self-fulfilling prophecies of economic fluctuation. If governments reveal the worse-case scenario, the public might enter panic mode. People and businesses might reduce spending dramatically as a result of poor expectation of the future. Both C and I would drop. AE function would shift downwards. The end result is a reduction in equilibrium national income that justifies people's fear. The viscous cycle would continue.

6) You're a close advisor to Margret who is recently appointed the Minister of Finance in a country suffering from a steep recession. Margret wants to hear your advice on how she can design fiscal policies to bring the economy out of the recession:

Explain to Margret the best she could do assuming she ignores any long term adverse consequences to the government. Explain why your suggested policy would work. (6pts)

The economy is in a recession, meaning $Y < Y^*$. Margret can reduce net taxes and increase government purchases (expansionary fiscal policy). Net tax = tax - transfer payment. Reducing net taxes increases the marginal propensity to spend. The slope of the AE function increase. The AE curve rotates counter-clockwise about its y-intercept. Increasing government purchases shifts the AE function upwards. Both together has a combined effect of increasing equilibrium GDP.

After hearing your initial suggestion, Margret shakes her head, "No can do. I don't want to put the government at risk of bankruptcy." Explain the rationale behind Margret's concerns. (4pts)

Budget function = $T - G$. Drastic reduction in taxes coupled with an increase in purchases will put the government in a deficit. At this point the government would have to borrow money locally or internationally to cover the deficit. However, if the economy doesn't improve and the deficit persists, the government would eventually run out of money to even make interest payments on the money borrowed. Lenders would demand to call back all their loans forcing the government into bankruptcy.

Understanding Margret's concerns, you suggest a compromise on your initial advice. How would your new advice help bring the country out of a recession without putting the government at risk of bankruptcy? (4pts)

You advise Margret to make use of the Balanced Budget Multiplier (BBM), i.e. increase tax revenue by the same amount as government purchase. The budget remains the same as before. However there will be a net increase to equilibrium GDP equal to the size of the increase in purchase. BBM works because increasing Gov't purchase by N dollars increases the initial round of spending by N. comparatively, taxing N dollars away from the people reduce the initial round of spending by $MPC \cdot N$. $MPC \cdot N$ will always be smaller than N. Thus the net effect is an increase in GDP.

PART 5 – CHAPTER 23

1) Compare demand-determined SRAS curve with the classical SRAS curve. (4pts) Explain how both are valid in the more realistic SRAS model we use today. (2pts)

Demand-determined output SRAS assumes that the only limit on output is the effective demand and that price level remains the same regardless of changes to real output (price is sticky). This curve is flat horizontally. The classical SRAS curve assumes that GDP remains the same, even in the short run because the market always clears. The curve is a vertical straight line, depicting the assumption that producers will always lower price to ensure the same level of output.

Both are in fact extreme ends of a more realistic SRAS curve. Supply is largely horizontal (demand determined) when GDP is low and there is significant excess capacity. Firms can increase production without running into marginal diminishing returns. The classical assumption is appropriate when GDP is very high above potential GDP. Factors of production are used to the maximum. Any further increase in output would require a near infinite increase in price level. The slope becomes vertical.

2) Josh observes a rapid inflation in his native country. He is perplexed by why inflation results in a shift to the AE curve but only a movement along the AD curve. Explain to Josh using terms you learned in Econ 102. (3pts)

Inflation erodes domestic consumer's real wealth (which is often fixed in nominal values), and increases the relative price of domestic goods versus foreign ones. A reduction in wealth reduces consumption, shifting the AE curve down. An increase in relative price of domestic goods decreases net export (decreases export and increases import) which also shifts the AE curve down. A lower equilibrium national income is reached.

AS curve plots equilibrium national income to the corresponding price level, ceteris paribus. Therefore the old equilibrium national income and the new equilibrium national income both lie on the same AD curve.

3) Alex is a rookie economist. He correctly deduces that the economy's marginal propensity to spend is 20%. He immediately claims that a positive aggregate demand shock in the form of a \$10 billion increase in export will increase real GDP by \$12.5 billion. Explain to Josh why his statement is likely way off mark. Hint: AS curve. (5pts)

$z = 0.2$; $1/(1-z) = 1.25$. From this Josh concludes that the positive AD shock will increase real GDP by $1.25 * \$10$ billion. Josh has assumed, without verifying, that price level will remain constant as output rises. Josh's statement will only be accurate if AS curve is in the horizontal section where output is demand determined. However if the AS curve is in the upward sloping region, producers will only increase output if price level increases. At a higher price level, there is a movement up and to the left along the AD curve that reduces real GDP. In actuality, the effective multiplier (when AS is not horizontal) will be smaller than the simple multiplier.

4) Discuss how a recession in Europe would affect Canadian GDP and price level in the short run and long run using the AD-AS model.* (2pts)

The recession in Europe would reduce the demand for Canadian exports. There will be a decrease in AD, GDP and price level will both fall in the short run. But in the long run, long term unemployment would force workers to accept lower wages. This causes the AS keep shifting until GDP is at its potential again. As a result, price level will drop even more.

5) Article excerpt taken from Financial Post, titled “In Canada’s economy there’s Alberta, and there’s everywhere else” by Greg Quinn on July 23, 2014

The oil- and gas-rich western province of Alberta was responsible for all of Canada’s net employment growth over the past 12 months, adding 81,800 jobs while the rest of Canada lost 9,500. Alberta’s trade surplus, \$7.4 billion in May, almost matched the deficit rung up everywhere else.

Alberta’s growing power is doing more than putting energy ahead of manufacturing exports such as Ontario’s cars and Quebec’s aircraft. It’s drawing tens of thousands of young people to the province, seeking energy jobs with some of the country’s highest salaries.

It’s also posing a challenge to policy makers: Oil wealth has led to a stronger Canadian dollar, squeezing Ontario and Quebec manufacturers. Canada’s central bank is keeping interest rates near historic lows, looking for a weaker currency to boost exports.

“We see a two-track economy,” Bank of Canada Governor Stephen Poloz said at a July 16 press conference after his decision to extend the longest interest-rate pause since the 1950s. Canada’s non-energy exports have disappointed, he said, holding back growth. At the same time, “energy exports have indeed been quite strong and we expect that to be a continuing trend.”

Alberta’s labor market has gone “from a very tight unemployment rate to an extremely acute, critical point,” Luft said by telephone. “They are really sitting at zero unemployment.”

What are some interesting implications of a “two-tracked economy” for Canada’s national GDP? How does a “two-tracked economy” affect the way we interpret national GDP? (2pts)

Canada’s national GDP might not reflect regional economic activities equally well. While jobs are created in Alberta, jobs are lost elsewhere. Boom in one region might cause a slowdown in another. Alberta’s oil export causes the Canadian dollar to appreciate against foreign currencies, hurting Ontario’s manufacturing export.

How might a sustained drop in oil prices affect Alberta and Ontario differently? What about Canada as a whole? (3pts)

As an oil exporter, a sharp and prolonged drop in price might cause a decrease in export revenue from which implies a negative demand shock for Alberta. Alberta GDP might decrease. As a manufacturing region, Ontario consumes oil. A sharp decrease in oil price might represent a drop in factor price leading to a positive supply shock. Ontario's GDP might increase. For Canada as a whole, it will depend on the relative strength of the two opposing shocks.

DISCLAIMERS:

The above questions are only meant to help you solidify your Econ 102 understanding and to help you get a feel for the level of difficulty that you might be reasonably expected to encounter on an actual Gateman exam. However the real exam might take any format and might include: T/F, multiple choice, short answers, calculations, problems, articles, etc.

Most of the questions above are designed by the author based on his past experience with Gateman's exams, with the notable exception of starred (*) questions which are taken with permission from professor Alfred Kong's Econ 102 sample exam. Starred questions are included by the author based on the judgement that they are reasonably similar to the types of question that Gateman has asked before.

As always, knowledge comes first. Exam-taking finesse comes second.