Macro Exam 2 Study Guide

1. Growth rates: *expansion of production possibilities…PPC moves to the right…LRAS moves to the right…PPC = LRAS (they are the same thing)…PPC = LRAS = Full Employment (FE)*
   a. Calculate
      Real GDP: *(GDPr CY – GDPr PY)/GDPr CY x 100*
      Population: *make sure you are focusing in on the year at hand…population growth rate = Pop CY – Pop PY/Pop CY x 100*
      Standard of living: *GDPr per capita…which means the GDPr/population…you can calculate growth rates in GDPr per capita the same way you did in calculating growth rates in GDPr (all you have to do is substitute the GDPr per capita figure for the GDPr figure.*
   b. Rule of 70: *70/annual % growth rate….You will apply this to GDPr per capita in all likelihood…so find the growth rate in GDPr per capita (make sure it is in % form) and divide 70 by it….70/GDPr per capita growth rate = the number of years it takes to double the GDPr per capita (or doubling the standard of living)…BE CAREFUL…this is a 3 STEP problem and your instructor will fool you by providing the answer at each step in the choices!*
2. Investment
   a. Calculate
      Gross: *Ig = In + depreciation*
      Net: *In = Ig - depreciation*
      Depreciation: *defined as the change in value of I over time…so depreciation = Ig – In…when this number is positive it is appreciation…don't be fooled*
   b. Define
      Gross: *Ig is the value of new capital…the amount of money spent on new tools!*
      Net: *The change in value of I over time…sometimes it goes up…BE CAREFUL.*
      Depreciation: *decrease in the value (amount) of capital*
3. DI = C + S: *Disposable income is the amount of income available for either Savings (S) or Consumption (C) AFTER TAXES*
4. Calculate wealth: *Wealth is what people OWN…DON"T CONFUSE THIS WITH INCOME! Savings is added into wealth….so, add up everything a person (or nation) owns (don't put income into this) and include savings…the sum is wealth*
5. Loanable funds market: *all financial markets…all money available for loans…MAKING LOANS CREATES MONEY*
   a. Increase and decrease supply: *this works exactly like the Law of Supply from the last unit. All you're going to do is change the name of the X and Y axis…here goes…Y = real interest rate (which is the price of money)…the symbol is a large (not capital) cursive i with a subscripted r….the X axis is the amount of loanable funds (in dollars)….as a rule, the higher the interest rate, the more banks and financial institutions are willing to loan out…the reverse is also true…remember, your curve moves right to show an increase and left to show a decrease. Shifters of supply: change in Disposable Income (DI)…direct…Expected future income…inverse…change in Wealth…inverse….change in Default Risk…inverse*
   b. Increase and decrease demand: *this works exactly like the Law of Demand from the last unit but your X and Y axis are different. Y = real*

interest rate….X = the amount of loans that consumers are willing to take out…as a rule, the lower the interest rate, the more people are willing to take out loans….movement of the curve…right is an increase in demand, left is a decrease in demand….ONLY ONE SHIFTER…change in the expected profit from investment in new capital…direct

c. Interest rate: *the price banks charge for loaning money…interest rates vary inversely with the price of bonds…so, if the price of bonds goes up, real interest rates drop…if the price of bonds drops, real interest rates rise. DID YOUR INSTRUCTOR EXPECT YOU TO CALCULATE INTEREST RATES?*

d. Equilibrium: *what can I say…it is the point where supply and demand for loanable funds is the same….real interest rates always move toward this equilibrium point*

6. Money
   a. M1
      Define: *currency, travelers check and demand deposits (what's in your bank account)*
      Calculate: *add the three things up that I put in the definition*
   b. M2
      Define: *M1, time deposits, saving deposits, money market mutual funds and all other deposits*
      Calculate: *add the things in the M2 definition up…CAUTION…don't forget that M1 is in M2*
   c. Functions of money: *there are 3 functions…medium of exchange (you trade money for goods and services)…unit of account (a price)…store of value (you can hold it and use it at a later date for goods and services…and it doesn't spoil or die)*
   d. Credit cards: *IOU…or a loan at a high interest rate…NOT MONEY*
   e. Fiat money: *something the government has said is money…usually paper and coin…but you could add stamps to this as well*
7. Reserves
   a. The reserve ratio: *I always used the symbol rr*
      Define: *minimum percentage of deposits all banks are required to hold with the FEDERAL RESERVE BANK (aka the Fed)*
      Calculate: *don't sweat this…Required Reserves/Deposits x 100*
   b. Actual reserves: *AR = RR + ER*
   c. Required reserves: *amount of reserves the Fed requires banks to keep on deposit at the Fed*
   d. Excess reserves: *ER = AR – RR; ER is the amount banks have to make loans…when ER increases, loans increase and the money supply goes up (so there is a direct relationship between ER and Ms – supply of money)….remember loans create money*
8. The money multiplier
   a. Define: *the amount of money banks can generate with a given reserve ratio by loaning out their Excess Reserves*
   b. Calculate: *it's the inverse of the reserve ratio…1/rr…you can also calculate it by 1/(1 – MPC) where the MPC is the marginal propensity to consume (change in Consumption/change in Income)*

9. Opportunity cost of holding money: *The **opportunity cost** is the interest rate forgone on alternative assets, which we can lump together generically and call "bonds." The **opportunity cost** of **holding money** is the nominal interest rate, not the real interest rate.*
10. Banks "create" money: *when a bank extends a loan, that loan is redeposited into the bank and the reserve ratio is applied to the 'new' demand deposit and a 'new' excess reserve is created. Remember that the loan had to come from the excess reserves of the bank.*
11. Money supply: *Ms…the supply of money is represented by a vertical line on the supply graph….Y = real interest rate, X = Money*
    a. Shift factors: *the Fed changes the Ms using one of its three tools…OMO (open market operations), RR (reserve ratio) or DR (discount rate)*
    b. Interest rate
12. The demand for money: *has to parts…Td (transaction demand) and Ad (asset demand)…Td is the demand for money to use as a medium of exchange and Ad is the demand for money to use as a store of value. Use a simple demand graph and make Y = interest rate and X = amount of money…Dm is demand for money and it varies inversely with interest rates.*
13. The Fed
    a. Tools of the Fed: *always impacts the Ms*
       Open market operations: *buying and selling of bonds, tool the Fed uses the most…when the Fed BUYS bonds, Ms increases and interest rates drop. When the Fed SELLS bonds, the Ms decreases and interest rates rise.*
       The discount rate: *interest rate the Fed charges on overnight loans to banks so that the banks can meet the required reserves…when the DR increases, Ms decreases, interest rates rise….when the DR decreases, Ms increases, interest rates drop*
       The reserve ratio: *you know what this is…when the rr increases, ER drop, loans decrease, the Ms decreases, interest rates rise….when the rr decreases, ER increase, loans increase, the Ms increases and interest rates drop*
    b. Functions
       Central bank: *controls the money supply*
       Monetary policy*: OMO, RR and DR….the Fed determines these*
       Money supply
    c. Chairman and who appoints
14. Long-run aggregate supply
    a. Shape of curve: *vertical line*
    b. Is equal to: *PPC*
    c. Shift factors: *same shifters as the PPC*
15. Short-run aggregate supply
    a. Shape of curve: *concave to the point of origin…three distinct regions…horizontal or near horizontal region (unemployment is a problem)…intermediate region…vertical or near vertical region (inflation is a problem)*
    b. Shift factors: *shifters of the PPC, changes in Ig*
16. Aggregate demand: *pretty much the same thing as GDPr*
    a. Shift factors: *changes in C, G and Xn*
    b. Fiscal policy: *only impacts AD (aggregate demand)…increases and decreases in government spending (G) and taxation (T) on individuals and businesses*

c. Monetary policy: *designed to impact AS (aggregate supply) by effecting the Ms in the hopes of spurring increases in Ig…it also impacts AD by increasing or decreasing Ig…only done by the FED…OMO, RR and DR…A KEY POINT TO REMEMBER IS THAT Ig IS A FACTOR IN BOTH AD AND AS SHIFTS!*
d. Trade policy: *US trade policy generally tries to get cheaper consumer goods for the American market….as a result we import for more than we export (M>X) which means we run a trade deficit where net exports is negative (-Xn)…which has a small negative impact on AD (and thus, GDPr)*
e. Government spending: *defined as all the money spent on PUBLIC GOODS…Public goods are things like roads, schools and aircraft carriers….Federal Budget outlines government spending….government spending can be either towards surplus (tax revenue > government spending) or toward deficit (tax revenue < government spending)…G in your AD/GDP formula*
f. Taxes: *Taxes are revenue for government. There are taxes on individual (impact C) and taxes on businesses (impact Ig)…when Ti rise, C drops (and visa versa)…when Tb rise, Ig drops (and visa versa).*

17. LRAS, SAS, AD
    a. Long-run equilibrium
    b. Short-run equilibrium
    c. Inflationary gap
       Potential GDP and actual GDP
       Calculate
    d. Recessionary gap
       Potential GDP and actual GDP
       Calculate