Unit 3 Exam Review

**Income and Expenditure**

1. Figure MPC and MPS.
   - See formulas and practice question #23 below.
2. Explain relationship between MPC and the multiplier.
   - Direct relationship, the higher the MPC, the greater the multiplier.
3. List and understand reasons for shifts in consumption graph.
   - 1) Change in expectations about future disposable income, 2) change in aggregate wealth
4. Figure the multiplier and the resulting impact of autonomous changes in spending.
   - See formulas and practice questions #24 and 25 below.
5. Figure and graph the consumption function. How is MPC represented on the graph?
   - See formulas and practice question #26 below.

**Aggregate Supply & Aggregate Demand**

6. Define aggregate supply and aggregate demand.
   - Aggregate supply – The total amount of goods and services that all firms in a country are willing to produce at each price level.
   - Aggregate demand – The total quantity of all goods and services demanded at each price level.
7. List and understand reasons for shifts of the AS and AD curves.
   - AD: 1) Change in Expectations, 2) Change in Wealth, 3) Size of Inventory, 4) Fiscal Policy, 5) Monetary Policy
   - SRAS: 1) Change in Commodity (input) prices, 2) change in nominal wages, 4) change in productivity
   - LRAS: 1) Increase in quantity of resources, 2) increases in quality of resources, 3) improvements in technology
8. Identify results of AD and AS shifts on: See practice question #40
   - a. Employment/unemployment
      - Negative AD or AS shift results in lower employment, positive AD or AS shift results in higher employment
   - b. Price level
      - Negative AD shift results in lower price level, positive AD shift results in higher price level
      - Negative AS shift results in higher price level, positive AS shift results in lower price level
   - c. Real GDP
      - Negative AD or AS shift results in lower Real GDP, positive AD or AS shift results in higher Real GDP
9. Explain why the AD curve is downward sloping.
   - 1) Interest rate effect, 2) Wealth effect, 3) Net Export effect
10. Explain why the SRAS and LRAS curves are sloped as they are.
    - SRAS: Wages are “sticky”, LRAS: Wages are fully flexible
11. Define sticky wages and relationship with aggregate supply. (noted above)

**The AD-AS Model**

12. Determine the impact of market conditions on SRAS, LRAS and the PPC.
    - See #7 above and practice question #39.
13. Define and understand potential output’s (Y*) relationship with the AD-AS Model.
    - Level of production if prices are fully flexible (LRAS)
14. Identify and graph inflationary and recessionary gaps.
    - Recessionary Gap
    - Inflationary gap

15. Define stagflation and identify its effects on the economy. See practice question #33.
    - Stagflation – rising prices and falling output (as well as rising unemployment). Result from leftward shift of SRAS curve (reduction in supply). Difficult to deal through policy because any attempt to deal with either inflation or unemployment worsens the other issue.

**Long-Run Macroeconomic Equilibrium & Government Policy**

16. Explain the differences between automatic and discretionary stabilization.
Automatic stabilizers are things that are already in place that reduce the severity of a recession or the excesses of an expansion. Discretionary fiscal policies are specific policy actions taken by the government in response to an inflationary or recessionary gap.

17. Give examples of automatic stabilizers.
Examples are progressive income taxes and government transfers (social welfare programs) that increase as a result of need.

18. Compare multiplier effects of fiscal policy options. See practice question #38 below.

19. Evaluate fiscal policy options to combat recessions and inflation. (Which government actions are likely to be most effective?) See #18 above and practice question #39 below.

20. List examples of government transfers.
Social Security, Medicare, Medicaid, VA benefits, Unemployment compensation

21. Explain the difference in multiplier effects between the spending and tax multiplier.
Spending Multiplier: the ratio of total change in Real GDP to the size of autonomous change in spending (the cause of the chain reaction)
Taxes on disposable income reduce the size of the spending multiplier. The initial autonomous change is MPC/(1-MPC) instead. Therefore, the total impact on Real GDP is reduced.

22. Explain why MPC + MPS + taxes = 1.
The portion of each dollar that goes to the government in the form of taxes is no longer available for spending or savings.

Practice Questions
23. Complete this chart.

<table>
<thead>
<tr>
<th>Income</th>
<th>Expenditures</th>
<th>MPC</th>
<th>MPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$8,000</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>$20,000</td>
<td>$11,000</td>
<td>0.15</td>
<td>0.85</td>
</tr>
<tr>
<td>$40,000</td>
<td>$25,000</td>
<td>0.7</td>
<td>0.3</td>
</tr>
<tr>
<td>$60,000</td>
<td>$35,000</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>$80,000</td>
<td>$41,000</td>
<td>0.3</td>
<td>0.7</td>
</tr>
</tbody>
</table>

What is the autonomous consumer spending? $8,000

24. Determine the multiplier and the net effect of the following autonomous changes in spending:
   a. An influx of $100 billion in government spending when the marginal propensity to consume is 0.75. 
      Multiplier = 1/(1-MPC) or 1/1-.75 = 1/.25 = 4
      Net effect of $100 billion spending is $100 billion • 4 = $400 billion
   b. An influx of $250 billion in business investment when the marginal propensity to consume is 0.5. 
      Multiplier = 1/(1-MPC) or 1/1-.5 = 1/.5 = 2
      Net effect of $250 billion spending is $250 billion • 2 = $500 billion
   c. An influx of $180 billion in export sales revenue when the marginal propensity to consume is 0.8. 
      Multiplier = 1/(1-MPC) or 1/1-.8 = 1/.2 = 5
      Net effect of $180 billion spending is $180 billion • 5 = $900 billion

25. If consumer spending increased by $25 billion, resulting as an equilibrium output increasing by $75 billion. What is the value of the MPC? K=3 ($75 billion/$25 billion), 3=1/MPS, MPS=.33, MPC=.67

26. Suppose an individual’s autonomous consumption is $15,000, his disposable income is $50,000 and his marginal propensity to consume is .75. What is the individual’s consumption spending?
   CF= $15,000 + ($50,000 x .75), CF = $52,500

27. Falling inventories, also known as ___Negative Unplanned Inventory Investment____, occurs when sales are (higher/lower) than expected. This reflects a (strengthening/weakening) economy.

28. Rising inventories, also known as ___Positive Unplanned Inventory Investment____, occurs when sales are (higher/lower) than expected. This reflects a (strengthening/weakening) economy.

29. How would each of the following impact the level of planned investment spending?

<table>
<thead>
<tr>
<th>Effect on investment spending</th>
<th>Effect on investment spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest rates</td>
<td>High</td>
</tr>
<tr>
<td>Expected real GDP</td>
<td>High</td>
</tr>
<tr>
<td>Production capacity</td>
<td>High</td>
</tr>
</tbody>
</table>

30. A change in ___Price Level___ results in movement along the AD/AS curves.

31. Potential Output is equal to $500 billion and current output is $400 billion. What is the output gap?
   $(500-400)/500 x 100 = -20\%$
32. Which event, a demand shock or supply shock, is more difficult for the government to alter through economic policies? Why?

Negative Supply Shock. Causes high inflation and high unemployment. Government cannot directly influence SRAS, only AD curve. If you fix one problem by shifting AD, you hurt the other problem more.

33. Create a correctly labeled graph of an economy at macroeconomic equilibrium.

- Draw and label a new SRAS curve (SRASL) representing a shift into stagflation.

b. Label the new price level and output at SRASL.

c. Why does this shift result in the greatest hardships for the economy?

d. See #15 above.

34. What is a weakness of fiscal policy? What might happen as a result from this weakness?

Time lags: In the form of Recognition, Decision, and Implementation lags. Government may end up doing more harm than good as a result of these lags.

35. Assume that the marginal propensity to consume is 0.8, and potential output is $800 billion. If current GDP is $850 billion, a policy (increasing/decreasing) taxes by $12.5 billion would bring the economy to potential output.

\[ K_T = \frac{-0.8}{0.2} = -4 \]

\[ $12.5 billion \] would bring the economy to potential output.

36. Assume that the marginal propensity to consume is 0.8, and potential output is $800 billion. If current GDP is $850 billion, a policy (increasing/decreasing) government spending by $10 billion would bring the economy to potential output.

\[ K_T = \frac{1}{0.2} = 5 \]

\[ $10 billion \] would bring the economy to potential output.

37. In Wonderland’s current economy households save 50% of their income. If the government lowers its transfers by $200 billion, what will real GDP be?

\[ MPS = 0.5, MPC = 0.8; M = \frac{1}{0.5} = 2; \] Disposable income is decreased by $200 billion (note: 50% of this will be leaked into savings.) We will have to multiply the multiplier by $100 billion (the 50% of disposable income that is consumed.)

\[ $100 billion \times 2 \] a fall in $200 billion

38. The current MPC is 0.8. The economy is experiencing a recessionary gap. Apply the multiplier effect and your knowledge of fiscal policy options to determine the net effect of each of the following, and determine which of the following options is likely to have the greatest impact.

a. A $60 billion increase in government transfers

\[ K_T = \frac{0.8}{0.2} = 4 \]

\[ 4 \times $60 billion = $240 billion increase in real GDP \]

OR

$60 billion flows into the hands of consumers, who have a MPC of 0.8, so $60 billion \times 0.8, or $48 billion actually goes into circulation. The multiplier effect applies to that $48 billion. The multiplier is \( 1/(1-MPC) \), or \( 1/(1-0.8) = 1/0.2 = 5 \).

\[ $48 billion \times 5 = $240 billion, so this is the net effect on Real GDP of $60 billion increase in government transfers \]

b. A $50 billion decrease in taxes

\[ K_T = \frac{-0.8}{0.2} = -4 \]

\[ -4 \times $50 billion = -$200 billion effect on real GDP \]

The tax cut means that $50 billion in additional disposable income is in the hands of consumers, who have a MPC of 0.8, so $50 billion \times 0.8, or $40 billion actually goes into circulation. The multiplier effect applies to that $40 billion, and we established in part (a) that the multiplier is 5 for a MPC of 0.8.

\[ $40 billion \times 5 = $200 billion, so this is the net effect on Real GDP of $50 billion decrease in taxes \]

OR use \( Tm \) and you’ll get the same number!

c. A $50 billion increase in government spending

This $50 billion in spending has a direct effect on aggregate demand, so this entire amount goes into circulation. Therefore, the whole $50 billion is subject to the multiplier effect.

\[ $50 billion \times 5 = $250 billion, so this is the net effect on Real GDP of $50 billion increase in government spending – and this is the option likely to have the greatest multiplier effect \]
39. Complete the following chart of discretionary policy options.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing taxes</td>
<td>F</td>
<td>C</td>
<td>Inflationary</td>
<td>Decrease</td>
<td>Increase</td>
</tr>
<tr>
<td>Increasing government spending</td>
<td>F</td>
<td>E</td>
<td>Recessionary</td>
<td>Increase</td>
<td>Decrease</td>
</tr>
<tr>
<td>Decreasing interest rates</td>
<td>M</td>
<td>E</td>
<td>Recessionary</td>
<td>Increase</td>
<td>Decrease</td>
</tr>
<tr>
<td>Decreasing government transfers</td>
<td>F</td>
<td>C</td>
<td>Inflationary</td>
<td>Decrease</td>
<td>Increase</td>
</tr>
<tr>
<td>Increasing money supply</td>
<td>M</td>
<td>E</td>
<td>Recessionary</td>
<td>Increase</td>
<td>Decrease</td>
</tr>
</tbody>
</table>

40. Determine the likely effect of each of the following on AD – or – SRAS (only one shift, negative or positive) and the resulting impacts on the economy.

<table>
<thead>
<tr>
<th>Effect on AD</th>
<th>Effect on SRAS</th>
<th>Impact on Price Level</th>
<th>Impact on Real GDP</th>
<th>Impact on Unemployment</th>
</tr>
</thead>
<tbody>
<tr>
<td>An increase in minimum wage</td>
<td>No change</td>
<td>Decrease</td>
<td>Increase</td>
<td>Decrease</td>
</tr>
<tr>
<td>Pessimistic consumer expectations</td>
<td>Decrease</td>
<td>No change</td>
<td>Decrease</td>
<td>Decrease</td>
</tr>
<tr>
<td>A decrease in stock (inventory)</td>
<td>No change</td>
<td>Increase</td>
<td>Decrease</td>
<td>Increase</td>
</tr>
<tr>
<td>An decrease in the cost of oil</td>
<td>No change</td>
<td>Increase</td>
<td>Decrease</td>
<td>Increase</td>
</tr>
<tr>
<td>Expansionary fiscal policy</td>
<td>Increase</td>
<td>No change</td>
<td>Increase</td>
<td>Increase</td>
</tr>
<tr>
<td>A decrease in the quantity of money</td>
<td>Decrease</td>
<td>No change</td>
<td>Decrease</td>
<td>Decrease</td>
</tr>
<tr>
<td>Contractionary fiscal policy</td>
<td>Decrease</td>
<td>No change</td>
<td>Decrease</td>
<td>Decrease</td>
</tr>
<tr>
<td>A decrease in wealth</td>
<td>Decrease</td>
<td>No change</td>
<td>Decrease</td>
<td>Decrease</td>
</tr>
<tr>
<td>A significant improvement in technology</td>
<td>No change</td>
<td>Increase</td>
<td>Decrease</td>
<td>Increase</td>
</tr>
</tbody>
</table>

41. For each of the following scenarios, label the correct panel illustrating the correct shift.
In the short run, an increase in investment spending is illustrated by: \(_A_\)

In the short run, an increase in net exports is illustrated by: \(_A_\)

In the short run, a decrease in wages is illustrated by: \(_C_\)

In the short run, an increase in wages is illustrated by: \(_D_\)