1. List and briefly describe the three main indicators of macroeconomic performance.

Real GDP (output): Level of output produced in an economy in a given time period, measured in real dollars.

Unemployment: Number of people 16 and older who are actively looking for jobs but are not employed.

Inflation: Increase in the average price level in a given time period.

2. Explain the Classical view of the macroeconomy, and how it differs from the Keynesian view.

Classical view: flexible wages, flexible prices. Market will self-adjust to any shocks or disturbances. Say’s law: Supply creates its own demand. Just get the prices right and employment and output will adjust. Basically ended with Great Depression – could not explain persistent low output with high unemployment and low prices and wages.

Keynesian View: Need policy to adjust to market shocks and disturbances. Believes increased demand will stimulate supply of more output.
3. Unemployment

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>145 million</td>
</tr>
<tr>
<td>Labor force</td>
<td>75 million</td>
</tr>
<tr>
<td>Number employed</td>
<td>60 million</td>
</tr>
</tbody>
</table>

3a. What is the unemployment rate in Year 1?
   A) 20.0 percent.    B) 41.4 percent.    C) 51.7 percent.    D) 80.0 percent.
   Ans: A

3b. What is the number of unemployed in Year 10?
   A) 10 million.    B) 15 million.    C) 70 million.    D) 85 million.
   Ans: B

3c. Name and briefly describe the four types of unemployment.

   Seasonal: temporary due to seasonal shifts / changes
   Frictional: in between jobs / job searches
   Structural: skills mismatch
   Cyclical: due to business cycle (recession)

3d. Explain why the optimal level of unemployment is not zero.

   Inflation-unemployment tradeoff. Idle resources like unemployment keep prices down. As an economy moves closer to their production possibilities frontier, resources are utilized and prices are driven up. Zero unemployment would result in high inflation.

   Another reason is that some types of unemployment are productive (seasonal, frictional).
4. **Inflation (please show your work for full credit)**

4a. Suppose a new graduate will have an annual nominal income of $35,000 for the first year she works. If the annual inflation rate is 10 percent, what salary would she need in the second year to maintain the same real income?
   A) $40,000.  B) $38,500.  C) $35,000.  D) $31,500.
   Ans: B

4b. If the CPI is 137 in Year Y, then it costs ______ in Year Y to buy the same market basket that cost ______ in the base period.
   A) $37; $100.  B) $137; $37.  C) $100; $137.  D) $137; $100.
   Ans: D

4c. If a market basket of goods cost $100 in the base year and $125 in a later year, then average prices have increased by:
   A) 25 percent.  B) 80 percent.  C) 125 percent.  D) 225 percent.
   Ans: A
5. Fiscal policy

5a. If \( Q_2 \) represents full employment, then a shift from \( AD_1 \) to:
   A) \( AD_2 \) will result in a full-employment equilibrium at point \( W \).
   B) \( AD_2 \) will close the GDP gap.
   C) \( AD_3 \) will take the economy past full employment to an equilibrium at point \( X \).
   D) All of the above.
   Ans: D

5b. Assume that \( Q_2 \) is full employment and the economy is in equilibrium at point \( V \). A shift in aggregate demand to \( AD_2 \) would:
   A) Result in an equilibrium at point \( W \).
   B) Result in an equilibrium at point \( Y \).
   C) Reduce the GDP gap but would not close it.
   D) Cause an AD shortfall.
   Ans: A

5c. Which fiscal policy action would increase aggregate demand from \( AD_1 \) to \( AD_2 \)?
   A) A decrease in transfer payments.
   B) A decrease in taxes.
   C) A decrease in government spending.
   D) All of the above.
   Ans: B

5d. Which of the following might decrease aggregate demand from \( AD_3 \) to \( AD_2 \)?
   A) A decrease in consumer confidence.
   B) An increase in taxes.
   C) A decrease in government spending.
   D) All of the above.
   Ans: D
6. **Fiscal policy: government spending (please show your work for full credit)**

6a. If the marginal propensity to save is 0.1 and government spending is raised by $5 billion, then total aggregate spending will rise by:

- A) $500 million per year.
- B) $5 billion per year.
- C) $10 billion per year.
- D) $50 billion per year.

Ans: D

6b. Assume an MPC of 0.6. The change in total spending for the economy as a result of a $10 billion new government spending injection would be:

- A) $6 billion.
- B) $25 billion.
- C) $60 billion.
- D) $600 billion.

Ans: B

7. **Fiscal policy: tax cuts (please show your work for full credit)**

7a. A tax cut of $8 billion with an MPC of 0.90 will cause a cumulative change in spending equal to:

- A) An increase of $720 million.
- B) An increase of $72 billion.
- C) An increase of $80 billion.
- D) A decrease of $720 billion.

Ans: B

7b. If the MPC = 0.95, a $1 billion tax decrease will eventually increase total spending by:

- A) $20 million.
- B) $19 billion.
- C) $9.5 billion.
- D) $8.5 billion.

Ans: B
8. Banks and lending power (please show your work for full credit)

8a. Suppose a bank has $50,000 in transactions accounts and a minimum reserve requirement of 10 percent. Then required reserves are:
A) $5,000. B) $50,000. C) $55,000. D) $500,000.
Ans: A

8b. If excess reserves are $25,000, demand deposits are $100,000, and the minimum reserve requirement is 20 percent, then total reserves are:
A) $20,000. B) $25,000. C) $45,000. D) $125,000.
Ans: C

8c. Suppose a bank has $1,000,000 in deposits, a minimum reserve requirement of 20 percent, and total reserves of $350,000. Then it has excess reserves of:
A) $1,350,000. B) $350,000. C) $200,000. D) $150,000.
Ans: D

8d. Suppose a bank has $1,000,000 in deposits, a minimum reserve requirement of 15 percent, and bank reserves of $170,000. Then the bank can make new loans in the amount of:
A) $15,000. B) $20,000. C) $170,000. D) $320,000.
Ans: B

8e. Initially a bank has a minimum reserve requirement of 10 percent and no excess reserves. If $10,000 is deposited in the bank, then ceteris paribus:
A) The bank can increase its loans by $10,000. C) Total reserves will increase by $9,000.
B) The bank can increase its loans by $9,000. D) Required reserves will increase by $10,000.
Ans: B
9. **Money multiplier (please show your work for full credit)**

9a. If the banking system has a required reserve ratio of 15 percent, then the money multiplier is:
   A) 1.5.  B) 6.67.  C) 5.0.  D) 15.0.
   Ans: B

9b. If total reserves for a bank are $200,000, excess reserves are zero, and demand deposits are $1,000,000, then the money multiplier must be:
   Ans: A

9c. Suppose the entire banking system has $50 million in excess reserves and a required reserve ratio of 10 percent. The deposit-creation potential of the banking system is:
   A) $500 million.  B) $50 million.  C) $10 million.  D) $5 million.
   Ans: A

9d. Suppose Shelby finds $10,000 under a bed and deposits it in her checking account. If the required reserve ratio is 25 percent, this deposit has the potential of increasing the money supply by:
   A) $2,500.  B) $10,000.  C) $30,000.  D) $50,000.
   Ans: C