**QUESTION 1 (25 points)**

The arrival of the COVID-19 pandemic in the United States in 2020 marked the start of twin economic and public health crises. A patchwork of government agencies at the local, state, and federal levels were called upon to manage the fallout of the pandemic. Responsibility for testing, contact tracing, and enforcement of local stay-at-home orders fell on state and local public health departments. Meanwhile, the federal government was primarily responsible for public outreach (e.g. reporting of caseloads and quarantine protocols), development of treatments and vaccines, and coordination of state and local response efforts.

1. Analyze the roles of state and local governments and the federal government in supplying public goods related to the pandemic. Explain whether this division of responsibilities is justified by the theory. **(15 points)**
2. The pandemic was not over when the Bipartisan Infrastructure Deal was passed. The White House claimed that it "makes the largest investment in roads and bridges since President Eisenhower’s investment in the interstate highway system." As comparison, the 1956 Federal-Aid Highway Act signed by President Eisenhower allocated $1.1 billion for the first year, plus $25 billion authorized for FYs 1957 through 1969. By employing the techniques taught in class, compare the two administrations with regards to their infrastructure expenditures. In your analysis, you may make assumptions where appropriate. **(5 points)**
3. Over the last few decades, cost-benefit analyses undertaken by the US federal government used the default discount rate of 3 percent and 7 percent. Recently, the Office of Management and Budget proposed to reduce the discount rate to 1.7%. What would be the implications of the proposed change for the estimated present value of policy choices that have substantial benefits in the future? **(5 points)**

**QUESTION 2 (25 points)**

In 2016, voters in the state of Washington rejected a ballot initiative aimed at creating a new statewide tax on carbon emissions. The text of Washington Initiative 732 is reproduced below:

"This measure would impose a carbon emission tax on the sale or use of certain fossil fuels and fossil-fuel-generated electricity, at $15 per metric ton of carbon dioxide in 2017, and increasing gradually to $100 per metric ton (2016 dollars adjusted for inflation), with more gradual phase-in for some users. It would reduce the sales tax rate by one percentage point over two years, increase a low-income sales tax exemption, and reduce certain manufacturing taxes."

1. Describe the market failure that the carbon tax aims to address. Is it appropriate for state governments to address this challenge given the scope of this market failure? Why or why not? **(10 points)**
2. Evaluate the state of Washington’s proposed carbon tax using the tax policy principles below: **(15 points)**
   1. Equity
   2. Economic efficiency
   3. Revenue production / adequacy

**QUESTION 3 (25 points)**

A few years ago, almost 75% of Maryland voters decided to support a constitutional amendment that authorizes the Maryland General Assembly "to increase, decrease, or add items to the state budget," provided that the change does not exceed the total amount submitted by the governor. This will start to take effect in 2024.

1. You’ve learned about the four major phases of the budget cycle. Describe which phase would be directly affected by the amendment. **(5 points)**
2. What are some potential advantages of having greater legislature scrutiny in the Maryland budget process? Your answer should specifically consider the economic efficiency implications of this amendment. **(10 points)**
3. In 2004, the Maryland House and Senate passed the “Managing for Results” legislation. The state law requires state agencies to set measurable goals that are consistent with their respective mission, among other things. How is this provision relevant to the concept of performance budgeting? Do you think performance budgeting--and other “technocratic” budgeting approaches—could ever substitute the role of politics in the budget process? Why or why not? **(10 points)**

**QUESTION 4 (25 points)**

The work that is done by bond rating agencies is a key factor in determining the borrowing costs of state and local governments. Assume you are an analyst working for one of these rating agencies.

1. Explain why some people might argue that there is a conflict of interest when bond issuers hire rating agencies to give their opinion and rating for bond issuance. Design one policy intervention by the government that might solve this problem. **(10 points)**
2. Is it possible to evaluate the creditworthiness of a general obligation (GO) solely based on the government financial statements (i.e., balance sheet, statement of activities, cash flow statement, and notes to financial statements)? Why or why not? **(10 points)**
3. Green bonds are gaining popularity across American states and localities. Would the interest rates of green bonds likely be higher, lower, or the same as compared to other traditional types of municipal bonds? **(5 points)**