Study Problem in Classical Macroeconomics

The Laramie Clean Air Act and its Consequences

Suppose that Laramie, Wyoming becomes the official standard for some future Clean-Air Act:

Any factory whose emissions result in air less pure than that found in Laramie
will be subject to a ceremonial dismantling on Earth Day.

Some economists recommend the classical analytical apparatus as a basis for illustrating the consequences of this act for the post-Earth Day macroeconomy. Assume that at least some factories are destroyed and show the consequences using the framework of textbook classicism.

1. Label the axes and draw the relationships that make up the classical framework. (Does the point at which your production function has a slope of zero align with the corresponding demand price for labor?)

2. Show the post-Earth-Day consequences of the Laramie-based Clean-Air Act by shifting the appropriate curves. (The factories destroyed should be considered labor-using capital rather than labor-saving capital.)

3. What happens to the level of employment?  
4. What happens to the real wage rate?  
5. What happens to the income received by labor?  
6. What happens to total real income?  
7. What happens to the level of output?  
8. What happens to the price level?  
9. What happens to the velocity of money?  
10. What happens to the rate of interest?

11. Now suppose that the Chairman of the Federal Reserve (no classicist he) attempts to soften the act's effect on output by expanding the money supply. What consequence, in terms of the classical model, will follow from the monetary injection? Show your answer diagrammatically and report the ultimate consequence with a short sentence.