Use the diagrams above to answer the following questions.

12. Point O on the above diagrams represents a temperature and pressure when all three phases exist in equilibrium. What is the point called?

13. At which point do solid and liquid phases exist in equilibrium?

14. At which point would a boiling liquid be found?

15. At which point would sublimation occur?

16. What is the name of the highest temperature at which it is possible to liquefy a gas with any amount of pressure?

17. What is the critical pressure for water?

18. What is the critical temperature for CO₂?

19. Does the solid-liquid equilibrium line on the water diagram have a positive or negative slope?

20. What change is observed as one approaches point F from the left at constant pressure and increasing temperature?

21. Refer to the phase diagram for water. What changes in temperature and pressure would be necessary to go from point D, vapor, to point C, liquid?