ECO 305: Intermediate Macroeconomics **Name: (10 points)** ______________________________
Instructor: James M. Murray, PhD
Practice Final Exam

Multiple-Choice: 2 points each. Choose the response that best answers each question.

1. Which of the following is a true description of the substitution effect when there is an increase in wage?
   (a) An increase in wage is an increase in income, so consumers enjoy more leisure and more consumption.
   (b) An increase in wage is an increase in the price of leisure, so consumers decide to enjoy less leisure and more consumption.
   (c) An increase in wage makes consumption more expensive, so consumers work more and consume less.
   (d) An increase in wage makes decreases the price of leisure, so consumers decide to enjoy more leisure and less consumption.

2. Which of the following causes a decrease in demand for labor?
   (a) An improvement in technology
   (b) An increase in wage
   (c) A destruction of capital stock
   (d) A decrease in the supply of leisure

3. Which variable(s) are under the control of the representative firm?
   (a) quantity of labor hired
   (b) quantity of labor hired and the wage
   (c) wage
   (d) quantity of labor hired, wage, and technology

4. Which of the following items is not part of the social planner's problem?
   (a) Indifference curves
   (b) Consumer budget constraint
   (c) Consumption and leisure decisions
   (d) Production possibilities frontier

5. Which of the following is a result of a decrease in government expenditures on the socially optimal outcome?
   (a) Increase in consumption, increase in leisure
   (b) Increase in consumption, indeterminate change in leisure
   (c) Increase in consumption, no change in leisure
   (d) Decrease in consumption, decrease in leisure

6. What is the impact of a decrease in the savings rate in the Solow growth model?
   (a) Long run capital decreases and output increases
   (b) Long-run consumption increases and long-run capital increases
   (c) Long-run capital increases and output increases
   (d) Long-run capital decreases and output decreases

7. Which of the following leads to an increase in the long-run level of capital per worker in the Solow growth model?
   (a) Increase in the population growth rate.
   (b) Decrease in the marginal product of labor
   (c) Increase in the rate of capital depreciation rate.
   (d) Decrease in the population growth rate.

8. Which of the following can cause permanent disparities in long-run output per worker between countries according to the Solow growth model?
   (a) Different levels of output per worker.
   (b) Different levels of capital stock per worker
   (c) Diminishing marginal product of labor
   (d) Unequal access to technology

9. Which of the following results in an increase in consumers' lifetime wealth, i.e. an increase in the net present value of lifetime income?
   (a) An increase in interest rate
   (b) A decrease in current taxes financed by an increase in future taxes.
   (c) An increase in future wages
   (d) An increase in borrowing

10. Which of the following would make the slope of the indifference curve between current consumption and future consumption ***flatter***?
   (a) An in increase in the interest rate
   (b) A decrease in the interest rate
   (c) A change to prefer more future consumption at the expense of current consumption, so MU_cons decreases and MU_future_cons increases
   (d) A change to more highly prefer current consumption, leading to an increase in MU_cons and a decrease in MU_future_cons

11. Which of the following is the utility-maximizing choice of a consumer in response to a decrease in future income in the consumption/savings model?

    (a) No change in current consumption and a decrease in future consumption

    (b) Decrease in both current and future consumption

    (c) Decrease in current consumption and a decrease in saving

    (d) Increase in current consumption and a decrease in future consumption

12. Suppose the interest rate increases for a saver/lender. Which of the following is true?

    (a) Saving decreases

    (b) Consumption in the future period decreases

    (c) Total utility increases

    (d) Borrowing increases

13. Suppose taxes **decrease** in the **current period** and there is no change to current or future government expenditures. What does Ricardian equivalence predict will be the impact on consumption decisions?

    (a) Increase in current consumption and increase in saving

    (b) Increase in both current consumption and future consumption

    (c) No change in current consumption and an increase in saving

    (d) Increase in current consumption and no change to future consumption

14. Suppose the interest rate **decreases** for a **borrower**. Considering both income and substitution effects, which of the following is TRUE?

    (a) Current consumption increases and future consumption decreases

    (b) The effect on future consumption is indeterminate

    (c) The effect on current consumption is indeterminate

    (d) Current consumption decreases and future consumption increases

15. Suppose consumer confidence decreases, and therefore consumers expect a **decrease in income in the future**. Which of the following is a predicted effect from the consumption/saving model?

    (a) Saving will decrease in the current period and consumption will increase in the future.

    (b) Consumption will increase in the current period and decrease in the future period.

    (c) Consumption will decrease in the current period and saving will increase.

    (d) Consumption will decrease in the current period and saving will decrease.

16. Which of the following can cause a **rightward shift** in the demand for labor (modeled with employment on the horizontal axis and wage on the vertical axis).

    (a) Improvement in labor productivity

    (b) Decrease in wage

    (c) Increase in number of people willing to work

    (d) Expected improvement in future technology

17. Which of the following could cause a **leftward shift** in output supply (modeled with the interest rate on the vertical axis and real GDP on the horizontal axis)?

    (a) Destruction of capital stock

    (b) Decrease in the interest rate

    (c) Increase in the marginal product of labor

    (d) Announcement of an upcoming improvement in future technology

18. Which of the following could cause a **leftward shift** in consumption demand (modeled with the interest rate on the vertical axis and quantity of consumption on the horizontal axis)?

    (a) Increase in interest rate

    (b) Decrease in future taxes

    (c) Decrease in interest rate

    (d) Increase in current government expenditures financed with an increase in future taxes

19. Which of the following could lead to a **leftward shift** in output demand (when labeled with the interest rate on the vertical axis and real GDP on the horizontal axis)?

    (a) Leftward shift in labor demand

    (b) Leftward shift in labor supply

    (c) Increase in interest rate

    (d) Decrease in government expenditures

20. Which of the following models is behind the consumption demand curve (with the interest rate on the vertical axis and quantity of consumption on the horizontal axis)?

    (a) Profit maximization model

    (b) Consumption / saving model

    (c) Investment decision

    (d) Solow growth model

21. Which of the following will lead to lower capital stock in the future than would otherwise occur?

    (a) Decrease in government expenditures.

    (b) Decrease in investment demand due to pessimistic business outlook

    (c) Improvement in labor productivity

    (d) Improvement in technology

22. During the COVID-19 pandemic in early 2020, many people switched to using credit services instead of using cash. What would be the impact on the market for money and the aggregate price level?

    (a) Money supply shifts right and price level increases.

    (b) Money supply shifts right and price level decreases..

    (c) Money demand shifts right and price level decreases.

    (d) Money demand shifts left and price level increases.

23. Which monetary policy causes a decrease in real interest rates in a model with sticky wages?

    (a) Decrease in taxes

    (b) Increase in money supply

    (c) None. A change in money supply affects only the aggregate price level.

    (d) Decrease in money supply

24. If the real wage is below the equilibrium level, which of the following is true?

    (a) There is excess employment, above the full employment level.

    (b) There is a labor market surplus

    (c) There is unemployment.

    (d) Real GDP is below potential GDP.

25. Which of the following policies will lead to the largest increase in real GDP?

    (a) Decrease in current taxes funded with a decrease in future government expenditures in a model with sticky wages.

    (b) Decrease in current taxes funded with an increase in future taxes in a model with flexible wages.

    (c) Decrease in current taxes funded with an increase in future taxes in a model with sticky wages.

    (d) Decrease in current taxes funded with a decrease in future government expenditures in a model with flexible wages.

Short-Answer Problem-Solving Questions: Write your answer in the space provided. The instruction to "illustrate" means use a graphical economics model. The instruction to "describe" means to give a short explanation for any changes in the model (i.e. a shifting curve), and describe the final result.

26. (5 points) Suppose there is a decrease in demand for labor which causes a decrease in the real wage. Describe and illustrate consumers' optimal choices for consumption, leisure, and labor supply. If there is an effect that is indeterminate, explain why.

27. (5 points) Suppose there is a destruction of capital stock that makes labor less productive. Describe and illustrate the impact on producers' profit-maximizing decisions for labor demand and production.

28. (5 points) Suppose consumer confidence falls and that consumers expect lower incomes in the future. Describe and illustrate the impact on utility maximizing choices for current consumption, future consumption, and saving. If the income and substitution effects work in opposite directions to make one or more outcomes indeterminate, explain this.

29. (5 points) Suppose there is a temporary decrease in taxes and government spending. Describe and illustrate the consequences in a dynamic general equilibrium framework with sticky wages on consumption, investment, real GDP, employment, real wage, real interest rate, and the price level.

30. (5 points) Suppose there is a permanent increase in government spending. Describe and illustrate the consequences in a dynamic general equilibrium framework with flexible wages and prices on consumption, investment, real GDP, employment, real wage, and real interest rate.

31. (5 points) Suppose Congress passes a bill to temporarily increase government expenditures, make no changes to current or future taxes, and fund the increase in current expenditures with a cut to future government expenditures. Suppose the government expenditures will be on infrastructure such as transportation networks, electric networks, and Internet access, and the improvements are expected to make businesses more productive in the future. Describe and illustrate the impact on the general equilibrium outcomes for consumption, saving, investment, real GDP, interest rate, real wages, and employment. Assume perfectly flexible wages and prices.

32. (5 points) Which of the following government spending policies in problems #30 and #31 leads to the largest change in real GDP? Explain your answer.

33. (5 points) Describe and illustrate how increasing returns at low levels of capital stock can lead to divergence in standard of living between different countries.