ECO 305: Intermediate Macroeconomics **Name:** ____________________
Instructor: James M. Murray, PhD
Practice Final Exam

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

1. Suppose there is a ***decrease*** in wages in the consumption leisure model. What impact does the ***substitution effect*** have on the decisions for consumption and leisure?

   (a) Increase in leisure and decrease in consumption

   (b) Decrease in leisure and decrease in consumption

   (c) Increase in leisure and increase in consumption

   (d) Decrease in leisure and increase in consumption

2. Which of the following causes an increase in demand for labor?

   (a) A increase in the supply of leisure

   (b) A destruction of capital stock requiring hiring workers to make up for the drop in capital.

   (c) An improvement in technology that increases the marginal product of labor.

   (d) An increase in wage.

3. Which variable(s) are under the control of the representative firm?

   (a) quantity of labor hired and the wage

   (b) wage

   (c) quantity of labor hired

   (d) quantity of labor hired, wage, and technology

4. Which of the following items is not part of the social planner's problem?

   (a) Consumption and leisure decisions

   (b) Indifference curves

   (c) Consumer budget constraint

   (d) Production possibilities frontier

5. Which of the following is a result of a destruction of capital that decreases labor productivity on the socially optimal outcome?

   (a) Decrease in consumption, increase in leisure

   (b) Decrease in consumption, indeterminate change in leisure

   (c) Decrease in consumption, indeterminate change in leisure

   (d) Decrease in consumption, decrease in leisure

6. Which of the following leads to an increase in capital stock per worker in the long-run in the Solow growth model?

   (a) Increase in consumption

   (b) Increase in leisure

   (c) Decrease in savings

   (d) Increase in savings

7. Which of the following causes an upward pivot in the curve illustrate the evolution of capital per worker in the Solow growth model?

   (a) Increase in the labor force

   (b) Increase in the capital depreciation rate

   (c) Increase in consumption

   (d) Improvement in technology

8. Which of the following is a prediction of the Solow growth model?

   (a) Poor countries never catch up to rich countries

   (b) Poor countries eventually catch up to rich countries

   (c) Capital stock per worker grows faster with a larger labor force.

   (d) Growth in output per worker is lower for countries with higher savings rates.

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) Decrease in future wages

   (b) Decrease in current taxes, financed by an increase in future taxes

   (c) Increase in interest rate

   (d) Decrease in interest rate

10. Which of the following would make the slope of the indifference curve between current consumption and future consumption ***steeper***?

    (a) A decrease in the interest rate

    (b) An in increase 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 current consumption and a decrease in saving

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

    (d) Decrease in both current and future consumption

12. Suppose the interest rate increases for a borrower. Which of the following is true?

    (a) Total utility decreases

    (b) Borrowing increases

    (c) Consumption in the current period increases

    (d) Total utility increases

13. Suppose taxes **increase** 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) No change in consumption and a decrease in saving.

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

    (c) Decrease in future consumption and an increase in future consumption

    (d) No change in current consumption and a decrease in 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) Current consumption decreases and future consumption increases

    (c) The effect on future consumption is indeterminate

    (d) The effect on current consumption is indeterminate

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

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

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

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

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) An improvement in management strategies that makes labor more productive

    (b) An increase in interest rate

    (c) A destruction of capital stock

    (d) A decrease in wage

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

    (a) Increase in interest rate

    (b) Increase in consumers' willingness to work

    (c) Increase in consumption demand

    (d) Expectation of an improvement in technology in the future

18. Which of the following could lead to a **leftward shift** in the investment demand curve (when labeled with the interest rate on the vertical axis and quantity of investment on the horizontal axis)?

    (a) Announced change in manufacturing regulations that will make capital less productive in the future

    (b) Temporary decrease in the marginal product of capital

    (c) Decrease in the depreciation rate

    (d) Destruction of capital stock

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

    (a) Increase in taxes

    (b) Expected improvement in future technology

    (c) Decrease in government expenditures

    (d) Temporary decrease in energy prices resulting in more productive use of capital

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) Consumption / saving model

    (b) Investment decision

    (c) Solow growth model

    (d) Profit maximization model

21. Which of the following will lead to an increase in future capital stock?

    (a) Destruction of current capital stock

    (b) Increase in investment demand caused by an expected improvement in productivity

    (c) Increase in current consumption demand

    (d) Decrease in labor demand

22. Suppose there is a reduction in government regulations on financial services that allow banks to offer more credit services to consumers. What is the impact on the market for money?

    (a) Decrease in money supply and an increase in equilibrium price level.

    (b) Increase in money supply and an increase in equilibrium price level.

    (c) Decrease in money demand and an increase in equilibrium price level.

    (d) Increase in money demand and a decrease in equilibrium price level.

23. Which monetary policy causes a decrease in employment in a model with sticky wages?

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

    (b) Decrease in taxes

    (c) Decrease in money supply

    (d) Increase in money supply

24. If labor supply is equal to labor demand, which of the following is true?

    (a) Employment is below its full equilibrium level.

    (b) Real wage is above the equilibrium wage

    (c) Employment is at the full equilibrium level

    (d) Real wage is below the equilibrium wage

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

    (a) An increase in government expenditures financed with an increase in taxes under flexible wages.

    (b) An increase in government expenditures financed with an increase in taxes under sticky wages.

    (c) An increase in government expenditures financed with a decrease in future government expenditures under flexible wages.

    (d) An increase in government expenditures financed with a decrease in future government expenditures in taxes under sticky 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 destruction of capital stock that makes labor less productive. Describe and illustrate the impact on producers' decisions for labor demand and production.

27. (5 points) Suppose there is a **destruction of capital stock that makes labor less productive**. Describe and illustrate the impact on the socially optimal outcomes for consumption, leisure, employment, and real GDP using the social planners' problem. If any effect is indeterminate, explain why.

28. (5 points) Suppose there is an **increase** in the national savings rate. Use a Solow growth model to describe and illustrate the impact on the long-run level of capital stock per worker and output per worker.

29. (10 points) Describe and illustrate how increasing returns at low levels of capital stock can lead to divergence in standard of living between different countries.

30. (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.

31. (10 points) Suppose there is a new business collaboration technology that will improve business activity immediately and for years to come. Describe and illustrate the short-run consequences in a dynamic general equilibrium framework with flexible wages and prices on consumption, investment, real GDP, employment, real wage, and real interest rate.

32. (10 points) Suppose there is an increase in current government expenditures financed with an increase in future taxes. Describe and illustrate the impact on the price level, real wage, employment, real GDP, interest rate, consumption, and investment in a dynamic general equilibrium framework with sticky wages.