Sample questions for Midterm II (the actual exam will have 16 questions)

There are two investment plans available to an owner of a garment firm. The expected revenues and costs are provided in the table below. Use the information provided to answer next ***three*** questions.

	Plan 1		Plan 2	
Year	Revenue	Cost	Revenue	Cost
0	$0	$50	$0	$70
1	$378	$210	$450	$550
2	$550	$430	$660	$360
3	$168	$0	$360	$0

1.) Suppose the interest rate is constant at 10% in next 3 years, and the interests are compounded annually, then the present value of the Plan 1 is
A.) $328.12.
B.) $378.12.
C.) $287.24.
D.) $298.11.

2.) Suppose the interest rate is constant at 10% in next 3 years, and the interests are compounded annually, then the present value of the Plan 2 is
A.) $386.77.
B.) $357.50.
C.) $356.10.
D.) $403.01.

3.) Which investment plan gives higher profit to the owner? Will the answer be different if I change the annual interest rate to 13.89%?
A.) Plan 1 gives higher profit to the owner, and this answer will not change if the interest rate is 13.89%.
B.) Plan 2 gives higher profit to the owner, but Plan 1 is a better investment plan if the interest rate is 13.89%.
C.) Plan 2 gives higher profit to the owner, and this answer will not change if the interest rate is 13.89%.
D.) Plan 1 gives higher profit to the owner, but Plan 2 is a better investment plan if the interest rate is 13.89%.

4.) Which of the following statements about the Classical Model is true?
A.) The number of firms is arbitrary because of the assumption of constant returns to scale.
B.) If we assume the households supply constant amount of labor hours, then static equilibrium real wage is always constant with respect to any change in the economy (such as technological progress and population growth).
C.) The loanable funds market is not necessary clear with the existence of government.
D.) There is no unemployment in both static and dynamic equilibria.

In a hypothetical economy, households save a constant fraction of their disposable income (disposable income = income – tax) and supply all labor that they can supply. In particular, the saving rate is 50% and the population size is 1000. The firms' production function exhibits constant returns to scale, and it is $f(K, L) = K^{0.7}L^{0.3}$, where K is capital and L is labor. The initial capital in 1999 is 450 and the depreciation rate of capital is 10%. Lastly, both the government spending and the tax are zero. Use the information provided to answer next ***four*** questions.

5.) The static equilibrium saving is
A.) 285.90.
B.) 185.90.
C.) 571.81.
D.) 346.78.

6.) The initial capital in 2000 is
A.) 590.90.
B.) 690.90.
C.) 976.81.
D.) 751.78.

7.) If the assumed government spending changes from 0 to 15, then the static equilibrium investment is
A.) 135.90.
B.) 260.90.
C.) 270.90.
D.) 285.90.

8.) If the government spending and the tax are still zero, but households supply only half of their labor hours for any level of real wage, then the static equilibrium saving is
A.) 132.23.
B.) 245.66.
C.) 286.70.
D.) 232.23.

9.) In a hypothetical economy, households save 10% of their income, the output in the current period is 100, and both the government expenditure and the tax are equal to zero. The investment function is $I = 38 - 60r$, where r is the real interest rate. The depreciation rate of capital is 10% and the initial capital in the current period is 190. Then
A.) the static equilibrium real interest rate is r=0.47 (47%), and the initial capital in the next period is approx. 181.
B.) the static equilibrium real interest rate is r=0.47, and the initial capital in the next period is approx. 171.
C.) the static equilibrium real interest rate is r=0.56, and the initial capital in the next period is approx. 181.
D.) the static equilibrium real interest rate is r=0.62, and the initial capital in the next period is approx. 139.

10.) In the Classical model, households save a constant fraction of their disposable income (disposable income = income – tax) and supply all labor hours that they can supply. Firms' production function exhibits constant returns to scale and diminishing marginal products for labor and capital. If the government decide to increase its expenditure, then
A.) both the static equilibrium investment and interest rate will decrease.
B.) the static equilibrium investment will decrease, but the static equilibrium interest rate will increase.
C.) both the static equilibrium investment and interest rate will increase.
B.) the static equilibrium investment will decrease, but output in the current period will increase.

11.) Which of the following statements about the Classical model is true?
A.) If there are changes in the government spending and the tax, then only the static equilibrium investment is affected. There will be no change in dynamic equilibrium capital.
B.) If the government increases its spending and tax by the same amount, then there will be no effect on the dynamic equilibrium output.
C.) Changes in the government spending and the tax have no effect on the current output.
D.) If the government increases its spending and tax by the same amount, there will be no effect on the static equilibrium investment, but the dynamic equilibrium investment will change.

12.) In an economy where households supply all labor hours that they can supply, if there is a technological progress which increases the marginal productivity of labor, then
A.) there will be no change in the current output because the labor supply is fixed.
B.) the dynamic equilibrium output will increase, but the static equilibrium output will not change.
C.) there will be no change in the static equilibrium real wage and employment because the labor supply is fixed.
D.) both the output in the current period and the real wage will increase.

13.) In an economy where households save a constant fraction of their disposable income (disposable income = income – tax) and supply all their labor hours that they can supply, if there is a technological progress which increases the marginal productivities of labor and capital, then
A.) the current and dynamic equilibrium outputs will increase, but the effect on the interest rate is ambiguous.
B.) the current output will not change, but the dynamic equilibrium output will increase.
C.) the static equilibrium investment will increase, but the change in the dynamic equilibrium capital is ambiguous.
D.) there is no change in the static equilibrium savings because households save a fixed fraction of their income.

In an economy, the saving rate is 30%, and the depreciation rate is 10%. The static equilibrium employment is 745. The production function is $f(K, L) = K^{0.5}L^{0.5}$, where K is capital and L is labor. Use the information provided to answer the next ***two*** questions.

14.) Suppose the government spending and the tax are zero, and the initial capital in the current period is 543, then capital in the next period will be
A.) 566.09

B.) 679.51
C.) 670.22
D.) 490.80

15.) Suppose the government spending is 10, the tax is 0, and the initial capital in the current period is 543, then the initial capital in the next period is
A.) 700.34
B.) 570.10
C.) 669.51
D.) 667.51

16.) Which of the following statements about the Classical model is true?
A.) The dynamic equilibrium investment must be equal to the investment in any static equilibrium.
B.) In the dynamic equilibrium, the equilibrium level of capital must equal to the equilibrium investment.
C.) In the static equilibrium, the goods market and the loanable fund market are simultaneously in equilibrium; but the labor market does not necessarily clear.
D.) In the static equilibrium, the goods market, labor market, and the loanable fund market are simultaneously in equilibrium.

Answers
1. A, 2. B, 3. C, 4. A, 5. A, 6. B, 7. C, 8. D, 9. A, 10. B, 11. C, 12. D, 13. A, 14. B, 15. C, 16. D

These questions are not necessarily representative of the content of the actual exam.