



Exam in ME2720
Macroeconomics for Business
January 8, 2018, 08:00-12:00

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Allowed utensils: Pen, paper, eraser, and calculator. Language lexicon is allowed, but shall remain at the supervisor's desk.

General Instructions: The exam comprises 25 multiple choice questions, each worth 4 points. There is only one (1!) valid answer per question. No minus points for wrong answers. Answer all questions in the sheet provided below. You need to wait at least 60 minutes before handing in your solutions.

Grading: Credit points from the term paper will be added to the exam score before grading. The overall grade of the course will be determined according to the following table:

A Points ≥ 92

B $84 \leq \text{points} \leq 91$

C $76 \leq \text{points} \leq 83$

D $68 \leq \text{points} \leq 75$

E $60 \leq \text{points} \leq 67$

F $57 \leq \text{points} \leq 59$

FX Points < 57

Good luck!

Answer Sheet

Name _____

Personnummer _____

How to answer:

☐ A ☐ B ☒ C ☐ D

Questions:

1. ☐ A ☐ B ☐ C ☐ D
2. ☐ A ☐ B ☐ C ☐ D
3. ☐ A ☐ B ☐ C ☐ D
4. ☐ A ☐ B ☐ C ☐ D
5. ☐ A ☐ B ☐ C ☐ D
6. ☐ A ☐ B ☐ C ☐ D
7. ☐ A ☐ B ☐ C ☐ D
8. ☐ A ☐ B ☐ C ☐ D
9. ☐ A ☐ B ☐ C ☐ D
10. ☐ A ☐ B ☐ C ☐ D
11. ☐ A ☐ B ☐ C ☐ D
12. ☐ A ☐ B ☐ C ☐ D
13. ☐ A ☐ B ☐ C ☐ D
14. ☐ A ☐ B ☐ C ☐ D
15. ☐ A ☐ B ☐ C ☐ D
16. ☐ A ☐ B ☐ C ☐ D
17. ☐ A ☐ B ☐ C ☐ D
18. ☐ A ☐ B ☐ C ☐ D
19. ☐ A ☐ B ☐ C ☐ D
20. ☐ A ☐ B ☐ C ☐ D
21. ☐ A ☐ B ☐ C ☐ D
22. ☐ A ☐ B ☐ C ☐ D
23. ☐ A ☐ B ☐ C ☐ D
24. ☐ A ☐ B ☐ C ☐ D
25. ☐ A ☐ B ☐ C ☐ D

1. Economic growth is:
 - (a) The increase in the output value (of goods and services) over a certain period of time
 - (b) The increase in productive capacity (of goods and services) over a certain period of time
 - (c) The increase in GDP generated by the exporting sector, assuming an open economy
 - (d) The difference between potential and current output
2. GDP in country A is currently twice that of country B , and A also has 1.75 times the population of B . However, A 's GDP grows by 3% per year, and its population grows by 2.5% per year. B 's GDP grows by 4% per year, and its population grows by 4.5% per year. Which of the following is true?
 - (a) At future date, A and B will have the same GDP per capita
 - (b) A has less GDP per capita than B
 - (c) A will always have more GDP than B
 - (d) A will always have more GDP per capita than B
3. The real GDP per capita of economy A was \$11,430 in 1990, whilst the real GDP per capita of economy B in the same year was \$34,300. Assume that economy B has already reached its steady state. How many years will economy A to catch up with economy B if the former grows, on average, at a 2.5% rate?
 - (a) 45
 - (b) 37
 - (c) 57
 - (d) 55
4. In the GDP per capita decomposition formula, average labor productivity corresponds to
 - (a) amount of workers per machine
 - (b) amount of machines per worker

- (c) amount of output per hour worked
 - (d) amount of hours worked by person employed
5. In the Solow-Swan setting, two economies, A and B , display different output levels. Assume, however, that both countries exhibit similar depreciation rates and initial stocks of (physical) capital. Given that the output level of country A is higher than the output level of country B , the two economies will share the same steady state if and only if
- (a) investment rates of country B are substantially higher than those of country A
 - (b) institutions are the same in both countries
 - (c) All of the above are correct
 - (d) None of the above is correct
6. According to the Golden Rule of capital accumulation
- (a) the steady-state level of capital maximizes consumption per worker
 - (b) the production function has a bigger slope than the line of depreciation
 - (c) the production function and the line of depreciation have the same slope
 - (d) Both (a) and (c) are correct
7. Endogenous growth models
- (a) drop the assumption of diminishing returns to capital
 - (b) do not model the key determinants of long-run growth
 - (c) Solow-Swan is the simplest example of this kind of models
 - (d) Both (a) and (c) are correct
8. Convergence
- (a) poor economies grow faster than rich ones because they share the same steady state (*absolute convergence*); poor economies grow faster than rich ones if they share the same steady state (*conditional convergence*)

- (b) economies eventually catch-up (*absolute convergence*); economies do not necessarily catch-up (*conditional convergence*)
- (c) all of the above are correct
- (d) none of the above is correct

9. Business cycles

- (a) are short-run fluctuations in aggregate economic activity around its long-run growth path
- (b) non-durable goods exhibit a more volatile behavior than durable goods
- (c) are periodic
- (d) all of the above

10. Business cycle' models

- (a) Keynesian economics understand business cycles mainly as the result of market failures whilst Neoclassical economics thinks of business cycles as efficient market responses to unavoidable shocks
- (b) In Neoclassical economies prices adjust rapidly to clear out markets; in Keynesian economics, prices are “sticky”
- (c) Keynesian models are criticized because they lack microfoundations; Neoclassical models are criticized because their predictions do not correspond to the empirical evidence to date
- (d) all of the above

11. The participation rate of economy A is 62.7% and its unemployment rate is 4.07%. If the labor force of such an economy is formed by 16 million people, the number of unemployed and the total population in the economy are approximately:

- (a) 0.65 and 25.5 millions, respectively
- (b) 0.65 and 10 millions, respectively
- (c) 1.3 and 51 millions, respectively
- (d) It cannot be determined with the information provided

12. Recall the decomposition of the labor force. One of the unemployment models covered in this course stated that equilibrium in the labor market occurs when inflows into and outflows from unemployment coincide—that is, when,

$$pL = sU$$

where L and U denotes the number of persons employed and unemployed, respectively; and p and s are the probabilities of losing and finding a job, respectively. Assume that the probability of losing a job is 0.1 and the probability of finding a job is 0.9. In comparison with the unemployment force, how many times bigger is the labor force?

- (a) 8
 - (b) 10
 - (c) 23
 - (d) It cannot be determined with the information provided
13. If 7% of employed workers lose their job each period while 70% of the unemployed find work, then the natural rate of unemployment is approximately:
- (a) 7.7
 - (b) 9.1
 - (c) 10
 - (d) It cannot be determined with the information provided
14. The increase in unemployment needed to reduce inflation by 1% is called
- (a) the misery index
 - (b) the Phillips' curve dilemma
 - (c) the sacrifice ratio
 - (d) the credibility gap
15. Central banks often set inflation targeting at rates close to 2-3% because...
- (a) inflation rates much higher than those introduce distortions into the economy via uncertainty, taxes, "shoe-leather costs", etc.

- (b) stable inflation is associated with a stable economy
 - (c) inflation rates much lower than those, i.e. deflation, may lead the economy into a recession
 - (d) all of the above
16. Consider the Keynesian' consumption model. What is not consumed, is saved. Assume that the savings rate of the economy is 15% and the ratio of autonomous consumption to income, i.e. A/Y , is $1/5$. What is then the marginal propensity to consume?
- (a) 0.55
 - (b) 0.65
 - (c) 0.75
 - (d) It cannot be determined with the information provided
17. The overall effect of the Keynesian' multiplier in the economy is picked up by the ratio $\frac{1}{1-b}$ times the initial injection of money by, for example, the government. Remember, however, that this ratio is the mathematical relationship that emerges from the aggregation of the "multi-period" effect. Assuming the marginal propensity to consume is $b = 0.7$, what is the effect on income in period 3 when government increases spending, as a response to recession, by 100 monetary units.
- (a) 34.3
 - (b) 49
 - (c) 24
 - (d) 333.33
18. The key equation in the permanent income model is

$$\frac{u'(c_{t+1})}{u'(c_t)} = \frac{1 + \rho}{1 + r}$$

where $u(\cdot)$ is the utility function, c denotes consumption (time is indexed by t), ρ is the "time preferences" parameter, and r denotes interest rates. If $\rho > r$, what are the implications for consumption?

- (a) $C_t > C_{t+1}$

- (b) $C_t < C_{t+1}$
 - (c) $C_t = C_{t+1}$
 - (d) It cannot be determined with the information provided
19. Assume firms make investment decisions by just considering two factors, namely: the marginal product of capital (MPK) and the cost of capital. There are two shocks in this economy: i) a new, more productive technology is introduced; and ii) the cost of capital increases as investors now demand a higher risk premium. What happens then?
- (a) the MPK curve shifts outwards, the cost-of-capital line remains unaffected; as a consequence, the capital stock increases
 - (b) the MPK curve remains unaffected, the cost-of-capital line shifts upwards; as a consequence, the capital stock decreases
 - (c) the MPK curve shifts outwards, the cost-of-capital line shifts upwards; what happens to the capital stock cannot be determined with the information provided
 - (d) none of the above
20. The tax wedge...
- (a) is the difference between what sellers receive for supplying goods and/or services and what buyers pay for
 - (b) increases as the tax rate departs from zero but it will ultimately fall when taxes deter workers from supplying hours
 - (c) leads the economy to a higher-output equilibrium
 - (d) all of the above
21. Tax smoothing consists in...
- (a) adjusting tax rates so that budgets are balanced in each time period
 - (b) keeping the same level of taxes rather than trying to yearly balance budgets
 - (c) finding the equilibrium in the different taxes (e.g. cigarettes, alcohol, property, etc.) so that tax revenue is maximized in every period despite of the change in consumers' preferences over time

- (d) none of the above
22. According to the Ricardian equivalence
- (a) it does matter how the government finances debt
 - (b) consumers are subject to “animal spirits” behavior
 - (c) it is not important how governments finance debt
 - (d) (b) and (c) are correct
23. In the IS-LM model
- (a) an increase in government spending implies a movement along the IS curve so that the equilibrium output is higher for given monetary policy
 - (b) an increase in government spending implies an outward shift of the IS curve so that the equilibrium output is higher for given monetary policy
 - (c) increases in the money supply shift the LM curve leftwards
 - (d) aggressive fiscal policy (e.g. increases in government spending or decreases in tax rates), when combined with expansionary monetary policy, has no effect on the economy
24. Which of the following is a pure public good?
- (a) public transportation
 - (b) interstate highway
 - (c) judicial system
 - (d) all of the above
25. Equity and debt
- (a) residual claim (equity) vs. fixed claim (debt) on cash flows
 - (b) fixed (equity) vs. perpetual (debt) maturity
 - (c) limited (equity) vs. unlimited (debt) upside
 - (d) all of the above are correct