Introduction to Macroeconomics · M4 · 2016-17

Problem Set 1 · Multiple choice questions

1. Which sentence is not false?
(a) GDP at constant prices is a nominal variable.
(b) Population is not a real variable.
(c) Real GDP may be smaller than nominal GDP.
(d) The CPI inflation rate minus the GDP deflator plus the population multiplied by the rate of change of real GDP per capita divided by the base period is twice the base period minus the rate of change of nominal GDP per capita minus the GDP deflator inflation rate plus the CPI.

2. If the GDP deflator goes up and nominal GDP goes down, then
(a) real GDP goes down.
(b) real GDP goes up.
(c) real GDP remains constant.
(d) nominal GDP goes up.

3. Which variables are related by definition?
(a) Nominal GDP and population growth rate
(b) Real GDP and GDP deflator
(c) GDP deflator inflation rate and CPI
(d) None of the above

4. In which case are the two variables flow variables?
(a) The amount of wealth at a given point in time and the rate of growth of real GDP.
(b) Population at a given point in time and the inflation rate.
(c) Nominal GDP and real GDP per capita.
(d) None of the above

5. Which sentence is not true?
(a) The rate of growth of real GDP may be smaller than the rate of growth of nominal GDP.
(b) The rate of growth of nominal GDP may be higher than the inflation rate.
(c) The rate of growth of real GDP per capita cannot be negative.
(d) The CPI inflation rate may be different from the GDP deflator inflation rate.

6. If nominal GDP is 600 and the CPI is 20, then the real GDP
(a) is $600/20 = 30$.
(b) is $600 \cdot 20 = 12{,}000$.
(c) is necessarily 600 if the period considered is different from the base period.
(d) cannot be determined.

7. Which of the following variables measures the general price level of an economy?
(a) The output gap
(b) The nominal GDP divided by the real GDP
(c) The nominal GDP per capita
(d) None of the above

8. In which case the two variables are not nominal variables?
(a) The GDP deflator and the CPI
(b) The nominal GDP per capita and the proportion of the population not having a job
(c) Population and the proportion of the population having a job
(d) None of the above

9. Real GDP necessarily rises if
(a) nominal GDP rises.
(b) the GDP deflator falls.
(c) nominal GDP falls and the GDP deflator increases.
(d) None of the above

10. In which case does a rise in the first variable necessarily cause a fall in the second variable?
(a) CPI inflation rate and potential GDP
(b) GDP deflator and nominal GDP per capita
(c) Real GDP and nominal GDP
(d) None of the above

11. Real GDP and real GDP per capita have in common that both are
(a) estimates of the underground economy.
(b) variables without units.
(c) stock variables.
(d) None of the above

12. Which of the following variables can be taken as a good measure of the aggregate production in an economy?
(a) The output gap
(b) Nominal GDP divided by real GDP
(c) The inflation rate or real GDP per capita
(d) None of the above

13. By definition of CPI-based inflation rate, that the CPI-based inflation rate rises means that
(a) the general price level diminishes.
(b) the population increases.
(c) the GDP deflator necessarily goes up.
(d) None of the above

14. The base period CPI is 100, it is 110 in period 2, and it is 100 in period 3. From period 2 to 3, the CPI inflation rate
(a) cannot be calculated.
(b) is 0%.
(c) is 10%.
(d) is negative.

15. Which sentence is not true?
(a) GDP at constant prices may fall and, at the same time, GDP at current prices may rise.
(b) Real GDP is always smaller than nominal GDP.
(c) If nominal GDP rises and the GDP deflator diminishes, then real GDP increases.
(d) Real GDP and nominal GDP may be equal.

16. Which variable cannot be negative?
(a) The inflation rate
(b) The change in the inflation rate
(c) The nominal GDP growth rate
(d) None of the above

17. Which pair of variables cannot both simultaneously grow?
(a) The CPI and the GDP deflator
(b) Population and real GDP per capita
(c) Nominal GDP and real GDP
(d) None of the above

18. Identify the sentence that is not false.
(a) A stock variable could be a flow variable.
(b) A disinflation necessarily implies a deflation.
(c) The CPI is only valid as a price level in the long run.
(d) None of the above

19. Which sentence is not false?
(a) The real GDP per capita growth rate is smaller than the nominal GDP growth rate.
(b) The GDP deflator inflation rate is the nominal GDP per capita growth rate minus the CPI inflation rate.
(c) The CPI inflation rate can never be equal to the GDP deflator inflation rate.
(d) The GDP deflator is a price index.

20. Which matching between a macroeconomic variable and the property it could be used to measure is logically invalid?
(a) Real GDP and size of an economy.
(b) Inflation rate and purchasing power of money.
(c) Real GDP per capita and standard of living in an economy.
(d) None of the above

21. In which case all variables are real?
(a) GDP at constant prices, GDP deflator, output gap
(b) Population, a flow variable, CPI
(c) A stock variable, nominal GDP, real GDP per capita
(d) None of the above

22. The GDP deflator inflation rate is positive.
(a) If the initial period for the calculation of the inflation rate is the base period, nominal GDP is higher than real GDP.
(b) The inflation rate associated with the CPI must necessarily be negative.
(c) Nor nominal nor real GDP have changed.
(d) None of the above

23. Which sentence is logically impossible?
(a) Simultaneously, GDP deflator goes up, nominal GDP goes down, and real GDP goes up.
(b) Simultaneously, population rises, the inflation rate falls, and GDP at current prices goes up.
(c) Real GDP per capita increases while population also increases.
(d) None of the above

24. Real GDP has increased. Which other variable must necessarily have also increased?
(a) The CPI or the GDP deflator
(b) Nominal GDP
(c) Real GDP per capita
(d) None of the above

25. Which sentence is not true?
(a) The fallacy of composition does not assert that the CPI inflation rate is greater than the GDP deflator inflation rate.
(b) The El Farol bar problem is not a particular case of the fact that nominal GDP and real GDP coincide in the base period on which real GDP is based.
(c) When an economy experiences inflation it is not necessarily the case that the economy also experiences disinflation.
(d) None of the above is true

26. Real GDP went up by 10%, whereas the CPI inflation rate went down by 5%. As a consequence,
(a) a fall in the GDP deflator inflation rate necessarily took place.
(b) an approximately 5% increase in nominal GDP occurred.
(c) nominal GDP may not have changed.
(d) None of the above

27. In a given period, the CPI is 100 and the GDP deflator is 200. Therefore,
(a) the inflation rate in that period is positive.
(b) the inflation rate in that period is negative.
(c) the above values for CPI and GDP deflator are impossible.
(d) None of the above

28. The Aaron Ramsey curse. A connection has been established between the goals scored by Arsenal footballer Aaron Ramsey and the subsequent passing (in a few hours or days) of celebrities such as Osama Bin Laden, Steve Jobs, Muammar al-Gaddafi, David Bowie, Whitney Houston, Paul Walker, Robin Williams, Sir Richard Attenborough, Günter Grass, Alan Rickman, Nancy Reagan… This connection could be considered an example of
(a) the fallacy of composition.
(b) Simpson's paradox.
(c) the cum hoc ergo propter hoc fallacy.
(d) the post hoc ergo propter hoc fallacy.
http://www.latintimes.com/aaron-ramsey-curse-list-he-grim-reaper-soccer-every-time-he-scores-someone-famous-dies-204096

29. Knowing the GDP deflator from 2013 and nominal GDP from 2013, it is possible to calculate
(a) the inflation rate of 2013.
(b) the CPI of 2013.
(c) real GDP of 2013.
(d) None of the above

30. Which sentence is not false?
(a) GDP per capita is, by definition, a measure of silent evidence.
(b) The fallacy *cum hoc ergo propter hoc* implies that the CPI inflation rate cannot be negative when the nominal GDP growth rate is positive but, provided that net exports are zero and the savings identity fails to be true, the fallacy implies that the GDP deflator inflation rate can be negative when the fallacy *post hoc ergo propter hoc* is part of the government budget.
(c) That an economy runs a trade deficit does not mean that the economy has lending capacity.
(d) The basket of goods on which the CPI is based is larger than the basket of goods corresponding to the GDP deflator.

31. The ratio real GDP/nominal GDP for period t
(a) is the GDP deflator of period t.
(b) is greater than 1 if the GDP deflator is positive.
(c) is smaller than 1 if the GDP deflator is also smaller than 1.
(d) None of the above

32. Which sentence is not true?
(a) The expressions "fallacy of composition" and "emerging property" have both exactly the same meaning.
(b) Deflation does not mean that the economy is experiencing a reduction in GDP per capita when population grows.
(c) For sufficiently small rates, the rate of change of real GDP per capita is approximately equal to the rate of change of nominal GDP minus the GDP deflator inflation rate minus the rate of change of population.
(d) The El Farol bar problem is not directly related to the possibility that the government may run a budget deficit at the same time that the economy runs a trade surplus.

33. Which sentence is not false?
(a) All stock variables are nominal variables.
(b) No flow variable is a real variable.
(c) The growth rate of real GDP per capita is smaller than the growth rate of nominal GDP.
(d) None of the above is true.

34. Which variable cannot, at the same time, be negative and increase?
(a) The growth rate of nominal GDP per capita.
(b) The difference between the growth rate of real GDP and the growth rate of nominal GDP.
(c) The rate of return of a financial asset.
(d) None of the above

35. Which sentence is not true?
(a) Certain changes in the liquidity ratio and the reserve ratio could leave the money multiplier unchanged.
(b) It is false that all nominal variables are stock variables and that no real variable is a flow variable.
(c) Deflation does not mean that the CPI is smaller than the GDP deflator.
(d) None of the above is true.

36. Which sentence is not false?
(a) Real GDP cannot be larger than the CPI inflation rate.
(b) The rate of change (or growth rate) of nominal GDP minus de rate of change of real GDP is always approximately equal to the CPI inflation rate.
(c) Disinflation means that the monetary base decreases but less than the amount of bank reserves.
(d) None of the above is true.

Inflation concepts

• **Inflation.** As an economic phenomenon (not as a number), the term '<u>inflation</u>' refers to the sustained increase in the CPI. It occurs for periods during which the inflation rate is positive.

• **Deflation.** <u>Deflation</u> is the phenomenon opposite to inflation: it is a sustained reduction in the CPI (negative inflation rates, not negative CPI values).

• **Disinflation.** <u>Disinflation</u> takes place when, during an inflation, the inflation rate diminishes, but remains positive.

• **Reflation.** <u>Reflation</u> refers to a period of inflation in which the inflation rate increases. By association, it is also said that the economy itself 'reflates' when the inflation rate increases (since, typically, when economy activity expands, the inflation rate tends to go up).

• **Hyperinflation.** <u>Hyperinflation</u> occurs with astronomical inflation rates (montly inflation rates of at least 50%). Under a hyperinflation, inflation is out of control.

• **Core inflation rate.** <u>Core inflation rate</u> is an inflation rate computed by excluding the prices of food and energy prices, which tend to be very volatile. Core inflation rate (as opposed to headline inflation rate) is a measure of underlying long-term inflation and can also be used as an indicator of future inflation.

Data sources

General
- http://www.tradingeconomics.com/
- http://ec.europa.eu/eurostat/data/database
- http://www.imf.org/external/pubs/ft/weo/2016/02/weodata/download.aspx
- http://data.worldbank.org/
- http://www.oecd-ilibrary.org/statistics

US
- https://fred.stlouisfed.org/
- http://www.presidency.ucsb.edu/economic_reports.php
- https://bea.gov/
- https://www.usa.gov/statistics

India
- http://www.indiastat.com/default.aspx
- http://data.worldbank.org/country/india
- http://www.mospi.nic.in/

Indonesia
- http://data.worldbank.org/country/indonesia
- http://www.oecd.org/indonesia/

Ecuador
- http://data.worldbank.org/country/ecuador
- https://www.cia.gov/library/publications/the-world-factbook/geos/ec.html

Argentina
- http://data.worldbank.org/country/argentina

Italy
- http://www.oecd.org/italy/
- http://data.worldbank.org/country/italy
- http://www.istat.it/en

France
- https://www.insee.fr/en/accueil

Spain
- http://www.ine.es/