Problem Set 7: Inflation and Unemployment

Questions 1 to 16 refer to the following information:

Calculate the inflation rate for each year based on both the GDP Deflator and the CPI using the following table:

Year	$P_{Croissant}$	$Q_{Croissant}$	P_{Coffee}	Q_{Coffee}
2017 (base year)	2.0	50	1.0	75
2018	2.1	55	1.1	75
2019	2.2	55	1.2	80
2020	2.4	60	1.4	80

Always round to one decimal and continue your calculation using the rounded values.

1. The GDP Deflator in year 2017 is _____.
   - a.   100
   - b.   107.0
   - c.   114.2
   - d.   128.0

2. The GDP Deflator in year 2018 is _____.
   - a.   100
   - b.   107.0
   - c.   114.2
   - d.   128.0

3. The GDP Deflator in year 2019 is _____.
   - a.   100
   - b.   107.0
   - c.   114.2
   - d.   128.0

4. The GDP Deflator in year 2020 is _____.
   - a.   100
   - b.   107.0
   - c.   114.2
   - d.   128.0

5. The CPI in year 2017 is _____.
    a.   100
    b.   107.1
    c.   114.3
    d.   128.6

6. The CPI in year 2018 is _____.
    a.   100
    b.   107.1
    c.   114.3
    d.   128.6

7. The CPI in year 2019 is _____.
    a.   100
    b.   107.1
    c.   114.3
    d.   128.6

8. The CPI in year 2020 is _____.
    a.   100
    b.   107.1
    c.   114.3
    d.   128.6

9. Using the GDP Deflator to calculate the inflation rate for the year 2017, then the inflation rate is _____.
    a.   7.0
    b.   6.7
    c.   12.1
    d.   Cannot be determined.

10. Using the GDP Deflator to calculate the inflation rate for the year 2018, then the inflation rate is _____.
    a.   7.0
    b.   6.7
    c.   12.1
    d.   Cannot be determined.

11. Using the GDP Deflator to calculate the inflation rate for the year 2019, then the inflation rate is _____.
    a.   7.0
    b.   6.7
    c.   12.1
    d.   Cannot be determined.

12. Using the GDP Deflator to calculate the inflation rate for the year 2020, then the inflation rate is _____.
     a.   7.0
     b.   6.7
     c.   12.1
     d.   Cannot be determined.

13. Using the CPI to calculate the inflation rate for the year 2017, then the inflation rate is _____.
     a.   7.1
     b.   6.7
     c.   12.5
     d.   Cannot be determined.

14. Using the CPI to calculate the inflation rate for the year 2018, then the inflation rate is _____.
     a.   7.1
     b.   6.7
     c.   12.5
     d.   Cannot be determined.

15. Using the CPI to calculate the inflation rate for the year 2019, then the inflation rate is _____.
     a.   7.1
     b.   6.7
     c.   12.5
     d.   Cannot be determined.

16. Using the CPI to calculate the inflation rate for the year 2020, then the inflation rate is _____.
     a.   7.1
     b.   6.7
     c.   12.5
     d.   Cannot be determined.

Questions 17 and 19 refer to the Cambridge Equation:

17. Assume the following yesterday:
    - Velocity is constant; assume V=1.
    - The money supply is M=110 bills.
    - Real domestic product is Y=100 apples.

    What was the price level?

    a.   0.9
    b.   1.0
    c.   1.1
    d.   Cannot be determined.

18. Now assume the following today:
    - Velocity is constant; assume V=1.
    - Real domestic product decreases to Y=95 apples.
    - The price level from 17. shall remain constant.

    In order to keep the price level constant, how much would the money supply need to be?

    a.   100
    b.   104.5
    c.   107.5
    d.   110

Questions 19 to 21 refer to the following information:

You are given the following information:
    - Number employed: 180 million
    - Number unemployed: 11 million
    - Adult Population: 300 million

19. Calculate the Labor Force. The Labor Force is _____.

    a.   191 million
    b.   169 million
    c.   289 million
    d.   300 million

20. Calculate the Unemployment Rate. The Unemployment Rate is _____.

    a.   4.2%
    b.   5.2%
    c.   5.8%
    d.   6.8%

21. Calculate the Labor Force Participation Rate. The Labor Force Participation Rate is
_____.
   a.   60.0%
   b.   61.5%
   c.   62.3%
   d.   63.7%