21.1 Business Cycle

1. There are four phases in a typical business cycle. Fill in the blanks.

2. State **THREE** general economic phenomena that can be observed at the stage of recession.

falling business confidence, levels of investment, consumption and production / rising unemployment rate / falling real GDP / moderately rising or even falling general price level (or any reasonable answers) (any THREE)

21.2 Inflation and Deflation

3. Inflation is a persistent increase in the general price level. Deflation is a persistent decrease in the general price level.

4. Explain **TWO** differences between using Consumer Price Index (CPI) and the implicit price deflator of GDP to measure the change in the price level.

Differences:

- CPI only includes a basket of consumer goods while implicit price deflator of GDP includes all final goods and services (including consumer goods and producer goods) included in the calculation of GDP.
- The basket of goods used in calculating the CPI is fixed (with weights revised infrequently), while a variable basket of goods (with weights varying from year to year) is used in calculating the implicit price deflator of GDP.

(or any reasonable answers) (any TWO)

©Aristo Educational Press Ltd.

5. Refer to the following information about an economy.

Year	Implicit price deflator of GDP
20X5	98
20X6	102

Calculate the inflation rate of the economy in 20X6.

[(102 – 98) / 98] × 100% = 4.08%

6. When there is inflation,

(a) the purchasing power of money *(increases / decreases)*.

(b) the cost of living *(increases / decreases)*.

(c) people tend to hold *(more / fewer)* monetary assets, such as cash, and tend to hold *(more / less)* of their wealth in the form of real assets, such as real estate.

(d) the costs of raw materials and labour *(increase / decrease)*. The quantity of exports *(increases / decreases)*.

(e) people's nominal income usually *(increases / decreases)*. If tax allowance remains unchanged, government tax revenue will *(increase / decrease)*.

7. When there is unanticipated deflation, people who have monetary assets and payees of a given amount of future payments will *(gain / lose)* while people who have monetary liabilities and payers of a given amount of future payments will *(gain / lose)*.

8. Explain whether the following people would gain or lose when there is unanticipated inflation.

(a) a woman who hires a domestic helper at a fixed hourly rate

She would gain, because the real value (purchasing power) of the amount she paid would decrease.

(b) a woman who borrowed a tax loan from a bank at a fixed interest rate

She would gain, because the real value (purchasing power) of the loan repayment would decrease.

(c) a man who received a fixed disability allowance from the government

He would lose, because the real value (purchasing power) of his fixed income would decrease.

9. Economist Irving Fisher put forth the following equation to illustrate the relationship between nominal and real interest rates:

Nominal interest rate = Real interest rate + Expected inflation rate

©Aristo Educational Press Ltd.

10. The *(nominal interest rate / real interest rate)* is the cost of holding money, because when holding money, people forgo the return on holding other interest-bearing assets.

11.

Nominal interest rate	8%
Expected inflation rate	5%
Actual inflation rate	10%

Based on the above information,

(a) cost of holding cash = 8%

(b) nominal rate of return on holding cash = 0%

(c) real rate of return on holding cash = 0% – 10% = –10%

(d) expected real interest rate = 8% – 5% = 3%

(e) actual real interest rate = 8% – 10% = –2%

12. The nominal interest rate of a bond is higher than the expected inflation rate. If the actual inflation rate is higher than expected, the actual real interest rate will be *(higher / lower)* than the expected real interest rate.

21.3 Inflation and the Quantity Theory of Money

13. Based on the quantity theory of money, explain the effect of an increase in the money supply on the general price level in the short run.

QTM: MV = PY, where M: money supply, V: velocity of circulation of money, P: price level, Y: real output, assuming V is constant. When the percentage increase in the money supply is higher than that in real output, the price level will increase.

14. Based on the quantity theory of money, explain the effect of a decrease in the money supply on the price level in the long run.

QTM: MV = PY, where M: money supply, V: velocity of circulation of money, P: price level and Y: real output, assuming V and Y are constant. A decrease in the money supply will lead to a decrease in the price level by the same percentage.

15. In the long run, money is neutral, which means a change in the money supply *(will / will not)* affect the level of real output.

21.4 Unemployment and Underemployment

16. Labour force = Employed population + Unemployed population

©Aristo Educational Press Ltd.

17.

	Number of persons
Aged 15 or above	750,000
Employed persons	400,000
Underemployed persons	150,000
Unemployed persons	25,000

Based on the above information,

(a) Labour force = 400,000 + 25,000 = 425,000

(b) Unemployment rate = 25,000 / (400,000 + 25,000) × 100% = 5.88%

(c) Underemployment rate = 150,000 / (400,000 + 25,000) × 100% = 35.29%

18. If both the unemployed population and labour force decrease by an equal amount, the percentage decrease in the unemployed population will be *(greater / smaller)* than the percentage decrease in the labour force, and the unemployment rate will *(increase / decrease)*.

19. State **TWO** losses to society caused by unemployment.

loss in output / social and political unrest / loss of human capital (any reasonable answers) (any TWO)

©Aristo Educational Press Ltd.