<u>Quiz 1 – Answers</u>

<u>Question 1</u>

Production-based accounting is used to estimate GDP by

A. computing for each firm the difference between sales revenue and the purchase of intermediate products, then summing this difference across all firms.
B. summing each firm's value added to the production process.
C. adding up the incomes received by all the resources that contributed to production.
D. A and B only
E. A and C only
F. A, B and C

B is correct; C is income-based accounting; A gives definition of value added, so is correct.
Discuss definition of value added and production approach

<u>Question 2</u>

The level of economic activity is calculated using the income method by

A. tracking the flow of funds from firms to the owners of the factors of production.
B. summing labor income and capital income.
C. adding together the income payments received by the various agents in the economy.
D. A and B only
E. A and C only
F. A, B and C

A, B and C are correct: Factors are labour and capital, owners receive income, all income in economy comes in the form of payments to labour and capital.
Discuss income approach to GDP measurement.

Question 3

Most products we buy go through a lengthy series of intermediate steps before they are available for us to purchase. For this problem, say we are tracing the stages, and the associated transaction values, involved in the production of a hypothetical loaf of bread:

	Price after transaction
Farmer sells wheat to miller	\$0.40
Miller grinds wheat into flour, and sells to baker	\$1.40
Baker bakes the loaf, and sells to a grocery wholesaler	\$2.20
Wholesaler sells loaf to various chain retail outlets	\$2.80
Retailer sells loaf to public	\$3.06

As a result of the production and sale of the loaf of bread,

A. GDP increased by \$3.06 according to the expenditure-based accounting method
B. GDP increased by \$3.06 according to the income-based accounting method
C. GDP increased by \$1.40 according to the production-based accounting method
D. A and B only
E. A and C only
F. B and C only
G. A, B and C

All accounting methods must yield the same result. By expenditure method, consumption increases by \$3.06 as a result of the production of the loaf of bread. Discuss expenditure method, equality of the three methods (see flow chart in slide 10 of Handout 1).

Question 4

You get married to your gardener who used to do maintenance work to your restaurant's backyard for \$3,000 a year. Your new spouse now does the same job for free. Still, the garden is getting very old and this year an incredible amount of plants are dying.

GDP will

A. Increase by $3,000
B. Not change
C. Decrease by $3,000
D. Decrease by less than $3,000
E. Decrease by more than $3,000

The market transaction now becomes home production, hence not GDP. So, those $3,000 will disappear from the GDP statistics, assuming that before the wedding the gardening was a registered transaction that would thus be accounted for in expenditure. While the garden is capital that depreciates, that does not further affect GDP as capital depreciation is not included in GDP. The depreciation of the garden would affect GDP if, instead, some new investment had been undertaken to refurbish it.
Discuss book, section 19.3

<u>Question 5</u>

What important factors do GDP estimates leave out in most countries?

A. Capital depreciation.
B. Home production.
C. Leisure.
D. The production of illegal professions.
E. The value added by the production of intermediate goods.
F. A, B and C only
G. A, B and D only
H. A, B, C and D only
I. B, C and D only

The value added by the production of intermediate goods enters in the production method. Illegal professions not accounted in most countries, but in some they are (however, only via an imprecise estimate).
Discuss book, section 19.3.

Question 6

The UK's gross national product would exceed its gross domestic product when the

A. UK residents own more assets abroad than foreigners own in the domestic economy.
B. production of foreign owned factors operating in the UK exceeds the production of domestically owned factors operating abroad.
C. amount of the national debt owed to foreigners is less than the amount of foreign debt owed to residents of the domestic economy.
D. production of domestically owned factors operating abroad exceeds the production of foreign-owned factors operating in the UK.

GNP>GDP if domestically owned factors receive more income than domestically resident factors, that is if the former exceed the latter in terms of value of production. Discuss handout 2, slide 4.

Question 7

A person sells old CDs at a garage sale for $500 that she had collected over the years at a total cost of $400.
In this case, current GDP

A. rises by $100
B. rises, but by less than $100
C. rises by $500
D. does not change

The sale is underground economy, so is not counted in GDP.
Discuss handout 2, slide 7

Question 8

Suppose that there are only two small countries in the world: Ascot and Delwich. Ascot's GDP is equal to $170 million while Delwich's GDP is $272 million. Delwich's GNP has been estimated to be equal to $312 million. The revenue earned by firms that operate in Delwich but are headquartered in Ascot is equal to $80 million.
Given the data above, Ascot's GNP is

A. $130 million
B. $150 million
C. $210 million

D. $250 million

$GNP_{Ascot}+GNP_{Delwich}= GDP_{Ascot}+GDP_{Delwich}$, so
$GNP_{Ascot}=GDP_{Ascot}+GDP_{Delwich}- GNP_{Delwich}=170+272-312=130$
Main point: GDP and GNP are simply different ways to attribute aggregate income to the two countries, yet aggregate income must be the same. If we considered the whole world as a single country, the distinction between GDP and GNP (location/ownership of factors of production) would become immaterial.