

**Examiner:**

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**The following aids may be used: calculator, dictionary**

**Examination questions:**

1. Important aggregates in national accounting are the gross domestic product at market prices ( $GDP^m$ ) and the gross domestic product at factor costs ( $GDP^f$ ).
  - a) What does the  $GDP^m$  measure and how is it related to the  $GDP^f$ ?
  - b) What is meant by the term "double counting". Why must double counting be avoided when calculating  $GDP^m$  or  $GDP^f$ ?
  - c) Explain briefly the three ways in which the  $GDP^m$  can be measured.
  
2. National accountants use different product classifications.
  - a) Explain the difference between consumption and investment. Is the classification of goods into consumption goods and investment goods (which is made in national accounting) always correct from an economic point of view? Give two examples that support your answer.
  - b) What is measured by government consumption? What problems occur when government consumption is to be measured? How are these problems solved in national accounting?
  - c) National accountants distinguish between government consumption and household consumption. Give a reason for this distinction.
  
3. The following transactions are observed in Germany:
  - BMW (a Germany automobile company) buys seat belts for 100€ from an Italian firm.
  - BMW sells cars worth 300€ to German households.
  - The German government buys police cars for 200€ from BMW.
  - During the year the police cars' value declines by 50€ due to wear and tear.
  - The German government pays wages and salaries to its police force (40€).
  - The Canadian government purchases cars from BMW for 150€.
  - BMW remits sales tax to the German government (20€).
  - Due to a recession in the automobile industry BMW receives a subsidy from the German government (10€).
  - Foreign shareholders receive dividends from BMW (60€).
  - After an earthquake in Latin America the German government donates 70€ to Ecuador.
  - a) Set up a simplified Consolidated System of National Accounts for Germany for the transactions above. Specify the kind of transaction (e.g. Ex, Im, etc.) and fill in the corresponding number. Assume that there are no value added taxes and no import taxes. Assume further that no other units (e.g. dealers) are involved in the transactions than those mentioned.
  - b) Calculate and interpret the following aggregates: gross domestic product at market prices, disposable national income, net borrowing/net lending abroad.

4. The consumer price index (CPI) and the implicit price deflator (IPD) are important statistics for an economy.
- What information can be derived from the CPI?
  - Calculate the CPI (base year 1997) for the years 1998 and 1999 using the information from table 1 below. Interpret your results.
  - What is the CPI's percentage change between 1998 and 1999?
  - Calculate the IPD for consumption expenditures (base year 1997) for the years 1998 and 1999 using the information from table 1 below. Interpret your results.
  - Compare your results from b) and d). What is the reason for the different outcomes?

Table 1

<i>i</i>	<i>t</i> = 1997		<i>t</i> = 1998		<i>t</i> = 1999	
	$P_{i,t}$	$Q_{i,t}$	$P_{i,t}$	$Q_{i,t}$	$P_{i,t}$	$Q_{i,t}$
1	5	8	6	7	7	6
2	4	7	5	6	6	5
3	3	4	2	5	1	6

*t*: year

*i*: product

$P_{i,t}$ : price of product *i* in year *t*

$Q_{i,t}$ : quantity of product *i* consumed in year *t*