Name: ____________________

IB Economics — Practice Exam

Instructions: Answer all questions in the spaces provided. Show your working — method marks are awarded even when the final answer is wrong. The answer key with worked solutions is available at examtex.com/free-exams.

Time Limit: 60 minutes

Short Answer (2 questions)

[20 points] 1. Study the following extract and answer the questions that follow. — "Meloria's sugar tax divides opinion." The government of Meloria has introduced an indirect tax of 0.40 dollars per litre on sugary drinks, citing an adult obesity rate that has climbed to 31 percent. In the first year of the tax, the average retail price of sugary drinks rose by 10 percent while the volume of sales fell by 4 percent. The finance ministry expects the tax to raise about 120 million dollars per year, which it says will be earmarked for school nutrition programmes. Drinks manufacturers argue that the tax is regressive and note that many consumers are simply switching to untaxed fruit juices and flavoured milks, some of which contain just as much sugar.

[4 points] (a) Define the following terms from the text: (i) indirect tax; (ii) regressive (tax).

[3 points] (b) Using figures from the text, calculate the price elasticity of demand for sugary drinks in Meloria. Show your working and comment on your result.

[4 points] (c) Using a demand and supply diagram, explain how the tax of 0.40 dollars per litre affects the market for sugary drinks in Meloria.

[9 points] (d) Using information from the text and your knowledge of economics, evaluate the effectiveness of the tax on sugary drinks in reducing obesity in Meloria.

[20 points] 2. Study the following extract and answer the questions that follow. — "Orvia's central bank tightens again." The Central Bank of Orvia has raised its policy interest rate from 3.0 percent to 5.5 percent, tightening monetary policy for the third time this year in an effort to return inflation to its 2 percent target. Over the past twelve months the consumer price index has risen from 125.0 to 134.0, driven by strong consumer spending and wage growth of 6 percent. The governor said that "demand is running ahead of what the economy can supply", but acknowledged that around 60 percent of Orvian mortgages are on variable interest rates. Business groups warn that higher borrowing costs will delay investment projects and could push the economy into recession.

[4 points] (a) Define the following terms from the text: (i) inflation; (ii) monetary policy.

[3 points] (b) Using the consumer price index figures in the text, calculate the rate of inflation over the past twelve months, and hence calculate the real rate of interest after the increase in the policy rate. Show your working.

[4 points] (c) Using an AD/AS diagram, explain how the increase in the interest rate is intended to reduce the rate of inflation in Orvia.

[9 points] (d) Using information from the text and your knowledge of economics, evaluate the likely consequences of the Central Bank of Orvia's decision to raise interest rates.

Calculations (1 question)

[12 points] 3. (HL) In the country of Astria, the weekly market for bottled energy drinks is described by the following linear functions, where P is the price in dollars per bottle and Q is the quantity in thousands of bottles per week.

$Q_d = 60 - 4P, \qquad Q_s = -12 + 8P$

[2 points] (a) Calculate the equilibrium price and equilibrium quantity. Show your working.

[2 points] (b) Calculate consumer surplus and producer surplus at this equilibrium.

[2 points] (c) The government imposes an indirect (specific) tax of 1.50 dollars per bottle on producers. Calculate the new equilibrium quantity, the price paid by consumers, and the price received by producers.

[1 point] (d) Calculate the government revenue from the tax.

[2 points] (e) Calculate the welfare (deadweight) loss resulting from the tax.

[3 points] (f) The government's stated aim is to reduce the consumption of energy drinks among teenagers. Using your results from parts (a) to (e), recommend a policy, other than raising the tax further, that the government could use to achieve this aim.