5.5 Economics of inequality and poverty

Name: _____ Class: _____ Date: _____ **Total: 30 marks**

KEY WORDS Lorenz curve • Gini coefficient • absolute poverty • relative poverty • progressive tax • transfer payment

Objective

Build the skills to answer exam questions on **inequality** and **poverty** : how they are measured, their causes and consequences, and policies to reduce them.

You must be able to:

- distinguish equality and equity, and income and wealth inequality
- use the Lorenz curve and Gini coefficient to describe inequality
- distinguish absolute and relative poverty, and outline multidimensional measures
- explain the causes and consequences of inequality and poverty
- evaluate taxes, transfer payments and other policies to reduce inequality
- calculate average and marginal tax rates in a progressive tax system

1 Key knowledge and worked examples

■ Inequality and poverty

Equality means everyone has the same; **equity** means fairness. **Income** is a flow (per year); **wealth** is a stock of assets (houses, shares, savings). Wealth is usually far more unequal than income.

Lorenz curve: plots the cumulative % of households (poorest first) against the cumulative % of income. The **line of perfect equality** is the diagonal; the further the curve bows below it, the more unequal. The **Gini coefficient** $= \dfrac{\text{area between the line of equality and the Lorenz curve}}{\text{total area under the line of equality}}$, from 0 (perfect equality) to 1 (one household has everything).

Poverty: absolute poverty is income below what is needed for basic needs (the World Bank's international poverty line, about \$3 a day at PPP); **relative** poverty is income well below the typical income in the country (e.g. below 50–60% of median income). The **Multidimensional Poverty Index** (MPI) combines health, education

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and living standards.

Causes: differences in education and skills, discrimination, unequal ownership of capital and land, inheritance, technology and globalization rewarding high skills, weak social protection, regressive taxes.

Consequences: lower well-being and health, less social mobility, less investment in children's education, crime and social tension, and possibly slower growth.

policy	how it helps	drawback
progressive income tax (higher marginal rates on higher incomes)	rich pay a larger share	may reduce incentives; avoidance
wealth and inheritance taxes	reduce wealth inequality	hard to value; capital flight
transfer payments (pensions, child and unemployment benefits)	raise low incomes directly	cost; poverty trap if benefits fall fast as earnings rise
minimum wage	raises pay of low-paid workers	possible job losses if set too high
education, health and infrastructure	raise future earnings	slow; high cost
universal basic income	a regular payment to all	very high cost

Taxes: direct taxes on income and wealth; **indirect** taxes on spending. A **progressive** tax takes a larger share of higher incomes; a **regressive** tax takes a larger share of lower incomes (most indirect taxes); a **proportional** tax takes the same share.

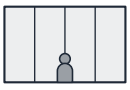
AHL – tax rates: the **marginal** rate is the rate on the last dollar earned; the **average** rate is total tax ÷ total income.

Answer shapes: define the measure → read the data → explain the cause → evaluate the policy (equity vs efficiency).

2 Practice

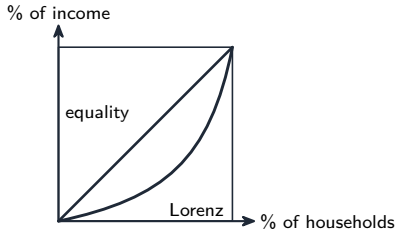
2.1 Distinguish between absolute poverty and relative poverty. [2]


absolute

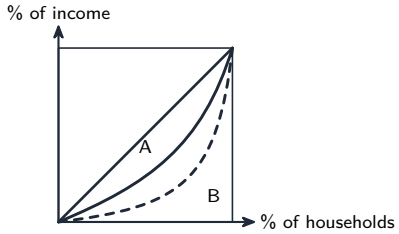

relative

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2.2 State what a Gini coefficient of 0 and of 1 would show. [2]



2.3 Explain **two** reasons why the Lorenz curve of a country might move further from the line of equality. [4]



2.4 Income tax is 0% on the first $10,000, 20% on income from $10,001 to $40,000 and 40% on income above $40,000. Calculate the tax paid on an income of $60,000, and the average and marginal tax rates. [3]



2.5 Using the tax system in the previous question, explain why it is progressive, and why a sales tax of 10% on all goods may be regressive. [3]



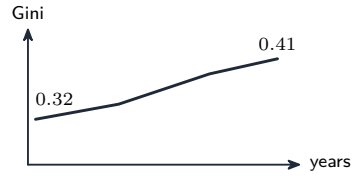
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3 Exam-style questions

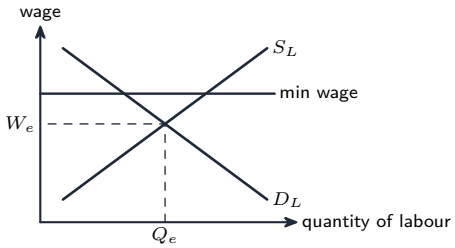
3.1 A country's Gini coefficient has risen from 0.32 to 0.41 in 20 years.

(a) Describe what has happened to income distribution. [2]

(b) Evaluate the use of transfer payments to reduce income inequality. [6]



3.2 A government is considering raising the national minimum wage by 15%.



Using a labour market diagram, evaluate this policy as a way to reduce poverty. [8]

[[drawlines:9]]

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Solutions

Marking: **M1** a correct method, **A1** the correct answer, **B1** an independent mark.

Each answer shows the steps, then the **result**.

2.1

absolute poverty: income too low to meet basic needs such as food, water and shelter; relative poverty: income well below the average or median income in a country

2.2

0: perfect equality: every household has the same income; 1: perfect inequality: one household has all the income

2.3

any two, explained: technology raises the pay of high-skilled workers relative to low-skilled; cuts in progressive taxes or benefits mean less redistribution; rising returns to capital and property increase incomes of the wealthy; weaker unions / falling real minimum wage

2.4

tax $= 0 + 0.2 \times 30\,000 + 0.4 \times 20\,000 =$ \$**14 000**; average rate $= 14\,000 \div 60\,000 \approx$ **23.3**%; marginal rate = **40**%

2.5

the average tax rate rises as income rises; low-income households spend a larger share of their income than high-income households, who save more; so a sales tax takes a larger share of a poor household's income

3.1

(a) income has become more unequal; a larger share of income goes to the richest households

(b) transfer payments (pensions, child benefits, unemployment benefits) raise the incomes of the poorest directly; they reduce poverty quickly and support spending (AD); but they are costly, with an opportunity cost for other spending, or need higher taxes; a poverty trap if benefits are withdrawn as earnings rise, reducing the incentive to work; they treat the symptom, not the causes such as low skills; judgement: needed in the short run, best combined with education and training

3.2

award up to [8]: diagram: minimum wage above equilibrium wage, Q_s and Q_d of labour, excess supply (unemployment) shown; workers who keep their jobs earn more, reducing in-work poverty; higher pay may raise motivation and productivity, and spending (AD); but firms may hire fewer workers, especially the young and low-skilled; the effect depends on the elasticity of demand for labour and how high the minimum is relative to the median wage; many poor households have no one in work, so they do not benefit; judgement: helps if set carefully; combine with benefits and training

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