

Resource Management Overview and Energy – MARK SCHEME

- 1 (a) One mark for correct calculation.

20% / 6 times greater / 500% more. (*Percentage sign not necessary.*)

AO4 = 1

- (b) Candidates should make reference to the **map showing world oil consumption in 2016** through using continent / continental area name(s) and / or data provided. They should show that they can apply knowledge and understanding in analysing the pattern shown by the map. Expect recognition of a global pattern of higher consumption in wealthier regions / emerging economies, lower in poorer regions. The connection should be made with oil consumption as an indicator of wealth and therefore an ability to secure the goods and services that allow well-being. Credit reference to economic and / or social well-being.

The **map showing world oil consumption in 2016** shows that Asia Pacific has the largest single share of the world oil consumption (1). Countries in this region can use this oil to develop rapidly and improve incomes through employment (1) so people are likely to have improved well-being as they can access more goods and services with this wealth (1).

Africa has the lowest share of world oil consumption at 4% (1). This links to for example Sub-Saharan Africa which has low levels of well-being measured through indicators such as HDI (1).

Richer countries will have the means to purchase oil and therefore energy for personal use and industrial development (1) and this will increase the well-being of the population as they will have a good standard of living as a result (1) as visible in the North American share at 24% when that is just USA and Canada (1).

Max 1 mark if no reference to the **map showing world oil consumption in 2016**.

Reserve 3rd mark (AO4) for clear and explicit reference to the **map showing world oil consumption in 2016**.

AO3 = 2

AO4 = 1

[Total 4 marks]

- 2 (a) fluctuated coal 1992

3 × 1 marks

AO4 = 3

- (b) Any two reasonable points (2 × 1) or a single developed point (2 marks)

Indicative content

- The relative price.
- Ease of use / flexibility of use or transportation of resource.
- Concerns about the environment.
- Government policy.
- Response to public opinion.

- Increasing drive towards renewables.
- Coal running out / decline, in the UK.
- International carbon agreements.

AO2 = 2

[Total 5 marks]

3 One mark for a basic statement, e.g.

- Farmers can make more profit (1)
- Farm to fork' integration allows producers / supermarkets to maximise profits (1)
- Food is cheaper (1)
- Reduces imports (1).

Two marks for a developed idea, e.g.

- Large farms have taken over small ones (1) so they can reduce costs in using machinery across a wider area and increase profits (d)(1)
- Supermarkets and large growing organisations such as Produce World have prospered (1) as they control every stage from growing to final sale (d)(1) and don't lose money to any middle-men (d)(1)
- Reduced costs of production mean prices can be kept lower (1) so food prices are lower in real terms than 30 years ago (d) (1) / so the shopper benefits (d)(1).

No credit for disadvantages.

AO2= 2

[Total 2 marks]

4 1 mark – basic idea of increasing food miles meaning a greater need for transport.

2nd mark – some development which includes observations about increasing use of fuel or a link to increasing levels of pollution.

AO2 = 1

AO3 = 1

[Total 2 marks]

5 The population is expected to increase by 9.7 million between 2014 and 2039 – mark is available for using data. More people will lead to an increased demand for water – for drinking, washing etc – qualification of type of use is needed for mark. More people owned dishwashers – up by 13% in under 10 years and as people have more money and more time saving devices, water use will go up as dishwashers use more water than washing up by hand.

There is no requirement to use both items of data but information must be used, not just lifted to gain marks.

2 × 1 or 1 × (1 = 1)

AO2 = 1

AO3 = 1

[Total 2 marks]

6 (a) One mark for any correctly named country:

Belarus, Belgium, Cyprus, Ireland, Luxembourg, Netherlands, Ukraine, United Kingdom.

AO4 = 1

(b) C: 7 (1 mark)

17.1% (1 mark)

Percentage sign not required. Answer must be to one decimal place.

If the candidate has made a mistake in the first part then allow the corresponding answer to the second part of the question:

A – 12.2%, B – 14.6%, D – 19.5%

AO4 = 2

(c) Answers should make use of the **map of Europe** through naming countries and affected areas in order to describe the pattern and should be focused on the 20.00-34.99% category.

One mark for a basic statement, e.g.

- There is a group of these countries towards south-eastern Europe (1)
- There is a belt of countries in this category running east from Italy's NW border (1)
- 5 of the relevant countries e.g. Portugal and Denmark are not next to another in the same category (1).

Second mark may be a second separate point or developed point for further descriptive clarity, e.g.

- A number of the countries are towards south-eastern Europe (1) with another 5 on the western, northern and north-eastern edges of mainland Europe (1)
- There is a belt of countries in this category running east from Italy's NW border (1) this begins with Slovenia and runs east to Romania (d)(1)
- 5 of the relevant countries e.g. Portugal and Denmark are not next to another in the same category (1) and there is also a Slovenia, Croatia, Serbia, Romania 'axis' in the south east (d)(1).

No credit for description of any categories other than 20.00-34.99%.

No credit for explanation.

AO4 = 2

[Total 5 marks]

7 One mark for a basic statement e.g.

- Some countries have low incomes (1)
- They lack supplies of fossil / other fuels (1)
- Some countries have no control over the energy companies (1).

Two marks for a developed idea e.g.

- Some countries have low incomes (1) so they are unable to buy energy no matter how low the price (d)(1)
- They lack supplies of fossil / other fuels (1) which means that they are dependent on other countries for their energy supply (d)(1)
- Some countries have no control over the energy companies (1) so even if the supply globally is good they cannot say how it is distributed (d)(1).

AO2 = 2

[Total 2 marks]

8 (a) One mark for the correct answer.

A 30–49%.

No credit if two or more answers are selected.

AO4 = 1

(b) One mark for basic description relating to distribution shown on the map e.g.

- the majority of countries with over 85% electricity from hydroelectric power are situated in Central and East Africa (1)
- a group of countries on either side of the equator have a high percentage of electricity produced from hydroelectricity (1)
- two countries in the western part of the continent have figures over 85% (1).

Second mark for developed point using detail from the map, e.g.

- the majority of countries with over 85% electricity from hydroelectric power are situated in Central and East Africa, such as Democratic Republic of Congo and Zimbabwe (2)
- a group of countries on either side of the equator have a high percentage of electricity produced from hydroelectricity extending from Ethiopia southwards to Mozambique (2)
- two countries in the western part of the continent have figures over 85%, Namibia and Cameroon (2).

No credit for listing names of countries or for describing the areas with low hydroelectric power generation.

AO4 = 2

[Total 3 marks]