

Mark Scheme (Standardisation)

Summer 2014

Pearson Edexcel GCE in Geography
(6GE03)
Unit 3: Contested Planet

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General Guidance on Marking

All candidates must receive the same treatment.

Examiners should look for qualities to reward rather than faults to penalise. This does NOT mean giving credit for incorrect or inadequate answers, but it does mean allowing candidates to be rewarded for answers showing correct application of principles and knowledge.

Examiners should therefore read carefully and consider every response: even if it is not what is expected it may be worthy of credit.

Candidates must make their meaning clear to the examiner to gain the mark. Make sure that the answer makes sense. Do not give credit for correct words/phrases which are put together in a meaningless manner. Answers must be in the correct context.

Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the Team Leader must be consulted.

Using the mark scheme

The mark scheme gives:

- an idea of the types of response expected
- how individual marks are to be awarded
- the total mark for each question
- examples of responses that should NOT receive credit.

Quality of Written Communication

Questions which involve the writing of continuous prose will expect candidates to:

- show clarity of expression
- construct and present coherent arguments
- demonstrate an effective use of grammar, punctuation and spelling.

Full marks will be awarded if the candidate has demonstrated the above abilities.

Questions where QWC is likely to be particularly important are indicated "QWC" in the mark scheme BUT this does not preclude others.

Question Number	Question
1a	
	Indicative content
<p>Figure 1 shows oil production 1965-2011. In terms of conventional oil, the graph might be seen to hint at a peak / plateau although there have been 'peaks' in the past e.g. in the 1970s.</p> <p>3 projections illustrate the uncertainty in the future – no peak, peak and decline, plateau (production flat going forward); these could be used as a structure for the answer i.e. reasons for different projections. There should be balance between physical and economic factors for Level 3. Note there will be some overlap. Answers should focus on explanation not description:</p> <p>Physical</p> <ul style="list-style-type: none"> Oil is a finite resource; it will 'run out' at some point or at least go beyond the point that production yields viable amounts of oil so some will argue a peak / plateau followed by decline is certain at some point e.g. UK North Sea oil peak in 1999. Discovery of new oil reserves of conventional oil and / or how much oil is actually left in existing reserves (which is disputed in some cases e.g. Saudi Arabia). Discovery of new non-conventional reserves / technically difficult reserves e.g. deep water oil Recovery levels from existing wells e.g. use of enhanced recovery could delay peak oil / lead to a plateau as more oil is physically recovered; this is partly related to technology (which in itself is an economic decision i.e. to use it). Uncertainty could relate to where oil reserves are e.g. the unstable Middle East or ownership or drilling rights e.g. Arctic. <p>Economic</p> <ul style="list-style-type: none"> Decisions to extract oil from currently protected places could delay the peak – might be seen as putting economic decision over environmental. Price: high oil prices could reduce demand and delay the peak, perhaps leading to a plateau rather than a distinct peak. Demand / economic growth – the higher economic growth rates (especially in the BRICs) the more likely oil supplies are to peak early. Population growth leading to increased demand so a peak occurs earlier. Demand might be reduced by oil being replaced by other energy sources e.g. biofuels as they become economically viable. Non-conventional oil e.g. tar sands extraction justified when prices are high. <p>NB environmental points can be credited when linked to an economic factor.</p>	

Level	Mark	Descriptor
Level 1	1-4	Descriptive answer with one or two ideas about peak oil; narrow and unbalanced. Structure is poor or absent. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Some explanations of physical and economic factors but may be unbalanced and /or lacking in detail. Some use of examples and may refer to the projections. Structure is satisfactory. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Range of detailed explanations for uncertainty with good use of examples in support. Balanced between physical and economic and linked to different projections. Structure is good. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare

Question Number	Question
1b	
	Indicative content
<p>Answers should focus on renewable energy; accept nuclear and any other renewables including biomass.</p> <p>Answers need to move towards a judgment as to whether or not, or how far, renewable might replace fossil fuels. Better answers (Level 4) are likely to link the renewable to the fossil fuels e.g. biodiesel / bioethanol replacing petrol and diesel.</p> <p>Answers could be structured by fossil fuel (as below), or by renewable sources potential to replace fossil fuels:</p> <ul style="list-style-type: none"> • Coal – mostly used to generate electricity and also in industry; it is cheap and reliable (provides baseload electricity) so would need a similar replacement. Nuclear might be seen as the best option for this but it has downsides (initial cost, security concerns, safety issues, waste disposal, public distrust); some might argue it has had its day in many cases (Germany, Italy, Japan) so is less viable now than in the recent past. Numerous other renewables could be discussed such as wind, solar, tidal, wave – these all have pros and cons (geographical constraints, reliability, economic costs, environmental impacts) – details will depend on those chosen and the examples used. • Oil – mostly used as a transport fuel in refined form i.e. petrol and diesel. It is cheap, flexible, easy to transport and distribute. Replacements include electricity from renewable sources (see above) via electric vehicles (expensive, new infrastructure needed, short range at present) as well as biodiesel and bioethanol (cheap, greener - but issues of supply versus food); hydrogen could be discussed but there are cost, safety and infrastructure concerns. • Gas – is increasingly used to generate electricity as it is clean and cheap, and available; also used in domestic and industrial settings. In many applications electricity from renewables is a possible alternative (see above) but biogas is also possible either from waste or biomass grown to produce biogas. <p>Possibilities for assessment include:</p> <ul style="list-style-type: none"> • Accept arguments that, in reality, alternatives such as shale gas or unconventional oil are more likely to replace current dependency on conventional fossil fuels for political and economic reasons. • Some renewables might be viewed as more reliable than others • Technology e.g. hydrogen might be seen as 'far off' compared to wind and therefore less likely to play a role. 	

Level	Mark	Descriptor
Level 1	1-4	A few general comments about a narrow range of renewable sources e.g. their benefits not related to fossil fuels. Structure is poor or absent. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Some details in an account which outlines the advantages and disadvantages of a range of renewables in a descriptive answer with limited link to fossil fuels. Structure is satisfactory. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.

Level 3	9-12	Some details of renewables and their advantages and disadvantages considered in relation to fossil fuels and has some implied assessment. Structure is good. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	A response which links fossil fuels to the renewables which might replace them and makes a judgment of how likely this is with detailed reference to pros and cons. Carefully structured. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number	Question
2a	
	Indicative content

Answers should focus on physical reasons why:

- Area A has only 750 m³ renewable water per year
- Area B has 3000 m³ per year

Some might comment that below 1700 m³ per person an area faces water stress and below 1000 m³ per person water scarcity i.e. Area A. Area B has ample water supplies.

Area A:

- Credit idea that climate change / global warming could be making the situation worse (*'and falling'* on Figure 2) by e.g. reducing annual rainfall / making rainfall more unreliable / increasing temperatures and thus evaporation).
- Has very low rainfall on 500 mm / year (semi-desert) so the water inputs are low helping to explain the low water supply total.
- In addition average annual temperatures are high (25°C) so **evaporation** rates will be high reducing water storage.
- Thin soils and sparse vegetation mean **interception** is low, and there will tend to be **surface runoff** rather than **infiltration** so reducing groundwater storage – this is likely to be limited anyway by the **impermeable** bedrock.
- Credit the idea that rain may come in a few major storms leading to runoff / flooding and 'wasting' the water.
- Better answers might argue more water could be got from the fossil groundwater **aquifers** but this is not renewable as it is not being **recharged**.

Area B:

- Its ample renewable water supply is partly explained by high rainfall input, much less of which will evaporate due to lower average temperatures (credit the idea that in summer **evapotranspiration** could be higher – warmer temperatures, seasonal rainfall lows, seasonal deficit)
- Deeper soils leads to more infiltration, especially under forested area promoting infiltration and thus groundwater storage.
- More **surface water** (river) than A so the area could be receiving some of its supply from elsewhere.
- The vegetation / forest encourages **infiltration** / **groundwater flow** and the sandstone is **permeable** so will act as an **aquifer** (wells, pumps for supply).

Do not credit human factors such as demand, or actions such as creating urban areas etc.

NB explanations, not comparisons, are required.

Level	Mark	Descriptor
Level 1	1-4	Descriptive answer with limited reasons for the water supply situations. May lack physical focus. Structure is poor or absent. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Some explanations for A and B but narrow or lacking detail, some use of physical process terminology to explain availability. Structure is satisfactory. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Detailed range of explanations for both areas: may use examples to support explanations. Good use of physical process terminology to explain availability. Structure is good. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare

Question Number	Question
2b	
	Indicative content
<p>Answers should focus on how water demand, which can increase or decrease, or stabilise, is influenced by economic development (growth, but also decline or slowing growth) and environmental concerns (such as concerns over biodiversity).</p> <p>Economic development:</p> <ul style="list-style-type: none"> • Growth rates such as China's annual 10% create a demand for water, especially for industrial use e.g. manufacturing. • As countries move from one development level to a higher one, demand for water rises but also changes from agricultural demand to industrial and domestic demand. • Growth in commercial agriculture is a major driver of water demand. • Greater numbers of consumers, especially urban ones (urbanisation driver) with formal connections and consumer goods that demand water e.g. washing machines, showers, dishwashers. • The demand from leisure e.g. in the USA such as swimming pools, golf courses etc. • Very high levels of economic development might be associated with conservation awareness linked to technology which reduces demand. <p>Environmental concerns:</p> <p>These are likely to lower demand as people become more aware of the problems associated with excessive / unsustainable water use:</p> <ul style="list-style-type: none"> • High levels of river / lake / sea pollution linked to a wasteful attitude and the environment as a 'sink' generates concern and more careful use of water e.g. water treatment. • Increasingly formal supply system leads to water being charged for and regulated. • Concerns about how sustainable supplies are e.g. groundwater leading to a reduction in use. <p><u>Opportunities for discussion:</u></p> <p>As the command is discuss, other factors could be covered such as:</p> <ul style="list-style-type: none"> • Population growth in areas of rapid growth e.g. India, Pakistan, parts of Sub-Saharan Africa: as population grows demand rises. • The role of technology might be argued as helping to reduce demand by making water use 'smarter' such as water metering, conservation schemes. • Some might argue that priorities change over time / as a result of development (from prioritising economic development towards water conservation) • The possibility of balancing economic development and water conservation e.g. Singapore. 	

Level	Mark	Descriptor
Level 1	1-4	A few general ideas on water demand linked to economic development or environmental concerns; one-sided. Examples described unselectively. Structure is poor or absent. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Some details in an account which describes some aspects of demand but unbalanced and limited use of relevant examples. Structure is satisfactory. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.

Level 3	9-12	Some discussion of both economic development and environmental concerns with some exemplification, but unbalanced. Does see more than one view. Structure is good. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	Detailed discussion of how water demand is influenced by economic development and environmental concerns, balanced and covers several perspectives using relevant examples. Carefully structured. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number	Question
3a	
	Indicative content
<p>Figure 3 shows levels of endemism (unique species) globally. Reasons for the pattern include:</p> <p>Physical :</p> <ul style="list-style-type: none"> • Islandisation – species on islands evolve in a different way the species of the original population and with a restricted gene pool, this produces unique species. • Altitude – in mountain areas, the altitudinal range produces a number of ecological niches / vertical zonation in a very small area with unique species living at different levels, in different climates / microclimates. • Climate / limiting factors – generally equatorial climates have high levels of endemism, which is strongly linked to general levels of biodiversity, because heat, light and water availability influence growth. • Structural complexity e.g. in tropical forests different species can occupy niches at different layers in a rainforest. • Coastlines on Fig 1 often have higher levels than interiors which might be explaining by the diversity of habitats where land and sea meet. • Age of area; time for evolution to create diversity / endemism. <p>Human:</p> <ul style="list-style-type: none"> • Lack of human interference / habitation i.e. isolated islands and remote uplands which have been left largely untouched so endemic species are preserved. • Level of conservation: high endemism and biodiversity levels are often cited as reasons to protect areas which helps maintain it. • A whole range of human activities (pollution, ecosystem destruction) might reduce levels of endemism. • Alien species reducing biodiversity and numbers of endemics. <p>Description is not required, but is likely to appear as part of an explanation: highest levels are found in island clusters e.g. Madagascar / Indian Ocean / South Pacific, Caribbean. Mountain areas are also high (Himalaya, Ethiopian Highlands). Tropical areas have moderate levels (Amazonia, Central Africa) as do areas with Mediterranean climates (California coast, the Mediterranean itself) with levels falling towards the poles.</p> <p>NB do not expect reference to all of the above factors even for L3 answers.</p>	

Level	Mark	Descriptor
Level 1	1-4	A few general ideas on one or two factors e.g. climate in a descriptive account. Structure is poor or absent. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	A response with some range of factors and some explanations linked to Figure 3 but unbalanced human versus physical. Structure is satisfactory. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	A detailed and balanced explanation of a range of both physical and human factors, with reference to different categories on Figure 3. Structure is good. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare

Question Number	Question
3b	
	Indicative content
<p>Answers could deal with value simply by outlining the value using the key words from the question, or take a 'goods and services' approach.</p> <p>A more up to date approach might be to take the ecosystem services structure from the 2005 MEA:</p> <ul style="list-style-type: none"> • <i>Provisioning services (goods)</i>: food (hunting and fishing, wild plants), crops, water, minerals, pharmaceuticals, energy (hydropower, biomass fuels). • <i>Regulating services</i>: carbon sequestration and climate regulation, purification of water and air, pollination. • <i>Supporting services</i>: nutrient cycling, seed dispersal, primary production. • <i>Cultural services</i>: cultural, intellectual and spiritual, recreation (tourism, ecotourism), scientific discovery. <ul style="list-style-type: none"> • Answers should focus on a named global ecosystem such as tropical forests, tropical grasslands, coral reefs or mangroves. <p>Max 10 for answers that focus on one named location e.g. Daintree and therefore lack the global dimension. If more than one named global ecosystem, credit the best.</p> <p><u>Opportunities for evaluation</u></p> <ul style="list-style-type: none"> • Answers should move towards a judgment as to which aspects of a global ecosystem are most valuable e.g. regulating services are often seen as critically important. • Good answers may draw a distinction between global and local value. • Comparison of value in different locations. • Distinctions between value to different groups could be drawn (local people, individuals, TNCs etc) • Value can be discussed in monetary terms but answers are more likely to focus on intrinsic value. The exact nature of the value and the balance of economic, cultural and environmental value will depend on the global ecosystem chosen. 	

Level	Mark	Descriptor
Level 1	1-4	Some general ideas on value for a named place / ecosystem but descriptive and lacking depth. Structure is poor or absent. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Some range of values are described but lacking depth and unclear / unbalanced on economic, cultural and environmental. Structure is satisfactory. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.

Level 3	9-12	Response which explains some of economic, cultural and environmental values for a named global ecosystem with some details but unbalanced; begins to evaluate. Structure is good. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	Detailed evaluation of economic, cultural and environmental value with specific locational detail in support. Carefully structured. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number	Question
4a	
	Indicative content
<p>Figure 4 shows middle class 2030 spending power growing in all 4 countries. In China it rises from under \$1 trillion to \$10 trillion, and in India from under \$1 to close to \$13 trillion. An increase in numbers of middle class can be inferred from the data. Answers need to focus on possible people and environment impacts which could be positive or negative:</p> <p>People</p> <ul style="list-style-type: none"> • Increased incomes / wealth means that many people, especially in India and China, will be lifted out of poverty and see improved living standards and quality of life. Many in India and China will become consumers – luxury, holidays, personal mobility. • Specific aspects like health, sanitation and diet will improve; possible rises in life expectancy (but also in heart disease, diabetes, obesity) • In the current developing world / BRICs, inequality might be seen as rising as the gap between the poor and the middle class becomes greater. • Employment / work patterns are likely to change from farming and factories towards services and offices – could be seen as positive or negative; social services increase. <p>Environmental</p> <ul style="list-style-type: none"> • Consequences are likely to be seen as more negative; consumption will rise dramatically and the demand for resources from India, China and others grows. • Environmental issues such as global warming (rising eco/carbon footprints), air pollution in urban areas, water demand (shortages), water pollution etc. • The middle class might be viewed as better educated and so concern for the environment rises as it has done in some developed countries, leading to a focus on conservation. 	

Level	Mark	Descriptor
Level 1	1-4	One or two general ideas, likely to be either positive or negative, but lacking detail. Structure is poor or absent. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Response which explains a range of impacts with some details and some balance between people and environment. Structure is satisfactory. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Detailed explanation of a range of positive and negative impact which is balanced between people and environment. Structure is good. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare

Question Number	Question
4b	
	Indicative content
<p>Direct influence could refer to:</p> <ul style="list-style-type: none"> • Colonial control • Military force / occupation (hard power) <p>Indirect influence could refer to:</p> <ul style="list-style-type: none"> • Neo-colonial influence / relationships • Soft power mechanisms such as cultural influence, trade and the role of IGOs. <p>There is inevitably some overlap between the two with some economic influences such as trade policy / agreements being seen as direct / hard.</p> <p>Answers will need to use examples of present day and past superpowers in the discussion – this could be in the form of a ‘timeline’ or it could compare more discrete examples. Possible lines of argument include:</p> <ul style="list-style-type: none"> • Individual superpowers direct influence initially e.g. the British Empire conquering by military force and using its global navy to protect global supply routes, but later attempting to influence its empire in more indirect ways such as imposing British culture, legal systems and civil service on its empire. • The colonial era (direct) up to the 1950s / 60s versus the neo-colonial era since (indirect); Dependency Theory could be used as a framework to explain neo-colonial influence especially through trade – possibly backed up by Superpower designed IGOs from the 1940s (WB, IMF, WTO/GATT, UN) • The argument that over time cultural influence and economic influence (indirect) has become more important e.g. the USAs domination of media, brands, its reserve currency status, its various vetoes and role in IGOs. • China could be seen as an example of superpower which has developed economic power first and is only now moving to develop its military to have the option of direct global power in the future. <p><u>Opportunities for discussion</u></p> <ul style="list-style-type: none"> • Counter-arguments could claim the USA has never stopped using direct influence i.e. military power (Iraq, Afghanistan, Somalia) so it is as important as ever. • Credit reference to Russia using direct influence in Ukraine (2014) and Georgia (2008) – might be seen as a return to a direct influence era. 	

Level	Mark	Descriptor
Level 1	1-4	A few general comments on superpower influence, focussing on one area e.g. military and lacking change. Structure is poor or absent. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Some explanations of a range of superpower influences, but limited reference to how the balance of these has changed. Structure is satisfactory. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.

Level 3	9-12	A response which covers both direct and indirect influences with some details and some focus on how the balance of these has changed, using examples. Begins to discuss at the top end. Structure is good. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	A genuine discussion supported by detailed examples of how the balance of indirect and direct influence has changed over time. Carefully structured. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number	Question
5a	
	Indicative content
<p>The countries in Fig 5 are broadly ordered by per capita income level. Expect some discussion of the 4 columns of data in terms of broad patterns and anomalies:</p> <ul style="list-style-type: none"> • % of people owning a mobile phone is broadly related to income / development because higher incomes allow these to be afforded; China at 93% is an anomaly (lack of landlines, but incomes high enough for most to afford these, cheap locally produced handsets, government investment in infrastructure by state owned companies). • % with internet is generally lower than % owning mobiles because the technology is more advanced / costly, and it requires precursors (PCs, electricity, cabling, and literacy); Pakistan has very low levels (7%) because of difficulty connecting people as well as poverty. Might note that the gap between the USA and Poland / China is much larger than for mobiles. • Younger people use social networking more than older (education levels, use of other technologies (mobiles, PCs) and possibly more urban; also related to wealth as a mobile / PC is needed • Some might comment on restrictions in China. • Older people use social networking much less; in the USA the high % could relate to leisure time / retired affluent people; levels are very high in Egypt for older people (Arab Spring effect) but low in China (fear of state snooping?). 	

Level	Mark	Descriptor
Level 1	1-4	One or two general ideas likely to focus on wealth differences and not move beyond this; descriptive. Structure is poor or absent. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Some range of explanations for technology use and / or age which focus on level of development but has further details e.g. spread of mobiles. Structure is satisfactory. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Range of detailed explanations for the technology and age data and explains some of the anomalies; likely to use examples. Structure is good. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare

Question Number	Question
5b	
	Indicative content
<p>Answers could focus on types of farm technology such as GM crops, Green Revolution, intensive / mechanised farming and / or other types of technology.</p> <p>Impacts can be positive or negative but should focus on people and the environment in a balanced way for L3 and L4 marks.</p> <p>The focus of the answer will depend on the examples of technology used, which can be high-tech, intermediate, appropriate and others:</p> <p>People</p> <ul style="list-style-type: none"> • Positive impacts of farming include increased food production due to technologies such as fertilizers, pesticides and farm machinery reducing costs, increasing yields and reducing food prices. • Biofuel technology could be seen as having the opposite effect. • GR technology dramatically increased yields of rice, wheat and maize from the 1960s onwards increasing food security especially in Asia. GM may have increased food supply but this is more open to debate (non food crops such as cotton and soy beans for cattle feed) • For people, there are negatives such as the social polarisation as a result of GM and GR creating wealthy landed farmers versus a low income labouring class. <p>Environment</p> <ul style="list-style-type: none"> • Some systems / technologies might be seen as more beneficial e.g. zero-tillage reducing soil erosion or even organics (taking technology back to an early stage to some extent) as promoting ecosystems. • Renewable energy technologies which reduce carbon emissions and are more sustainable. • Negative impacts (needed for 'assessment') include the impact of monocultures in wild plants and animals that co-exist in fields – impact of herbicides and pesticides; the widespread use of DDT and its impacts on the food chain might be mentioned; eutrophication and dead-zones – nitrogen and phosphate overloading which reduced biodiversity and creates dead aquatic and marine ecosystems. • Acceptable technologies include energy e.g. nuclear power, medical technology (which might be seen as largely positive). ICT / communications technology. <p>Very generalised technology such as 'cars' will tend to be self-penalising.</p> <p>Opportunities for assessment:</p> <ul style="list-style-type: none"> • Could conclude that technology has positive influences on humans but much less so on the environment. • Comparisons of impacts between technologies e.g. GR –v- GM <p>NB farming is a suggested focus not a requirement, even for Level 4.</p>	

Level	Mark	Descriptor
Level 1	1-4	One or two general statements describing some impacts of technology, narrow and inaccurate. Structure is poor or absent. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Describes a range of impacts with some explanation for some technologies in general terms. Likely to be unbalanced people / environment. Structure is satisfactory. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.

Level 3	9-12	Range of explanations of the impacts of technology on people and the environment with some details and begins to assess. Structure is good. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	Detailed assessment of the extent of positive impacts on people and the environment with good use of examples. Carefully structured. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number	Question
6a	
	Indicative content
<p>Answers will need to focus on each country in turn, although an overview might be provided.</p> <p>Kenya – made some progress in terms of HDI (Fig 2) 1990-2011 although did least well of the 3 countries (and dipped around 2000); income levels barely changed in PPP terms (Fig 3) and life expectancy actually fell, as the maternal mortality increased sharply. HIV rates almost doubled. Fig 4 suggests many MDG targets will be missed.</p> <ul style="list-style-type: none"> • Overall Kenya seems to have stood still in many ways, but with health actually deteriorating. <p>Uganda – has performed well in HDI terms with a steady increase from 0.3 to 0.45 suggesting progress in quality of life. Incomes have doubled and life expectancy have all improved significantly; some might see major leaps being made in maternal mortality and especially HIV – which has fallen from a very serious 10.2% to 6.5% (close to what Kenya has increased too); population is still growing very quickly, but Uganda has made the best progress in meeting the MDG in Figure 4 with only hunger off target. Figure 5 shows how Uganda’s economy has modernised with % of total GDP from agriculture falling from over 50% to just over 20% (better paid jobs).</p> <ul style="list-style-type: none"> • Overall Uganda has made the most progress (could be related to Gov spending – see Fig 7) <p>Tanzania – is doing least well in terms of MDGs and it looks as if it will miss all the targets shown by 2015; on the other hand incomes have increased much more than in Kenya and life expectancy has risen by nearly 8 years and over taken Kenya’s; health indicators are more mixed with an increase in HIV but small improvement in other areas.</p> <ul style="list-style-type: none"> • Overall human development seems to have improved but not so much to get the MDG on track (some might argue it is in 2nd place, with Kenya 3rd and Uganda 1st). <p>Synoptic linkages</p> <ul style="list-style-type: none"> • Other development measures from research, such as other MDGs not shown in Figure 4. • Detailed understanding of HDI 	

Level	Mark	Descriptor
Level 1	1-4	Descriptive answer i.e. three separate accounts with limited comparison; limited reference to evidence and generalised. Structure is poor or absent. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Some accurate reference to data within a comparison of the three countries, but may be unbalanced and / or poorly selected. Structure is satisfactory. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	9-12	Detailed use of data and a clear comparison, provides an overview at the top end and there is evidence of research / wider links. Structure is good. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number	Question
6b	
	Indicative content
<p>Answers should consider economic and political issues, but could also broaden the discussion to consider other issues such as global warming, water supply.</p> <p>Economic</p> <ul style="list-style-type: none"> Debt levels (Fig 7) have fallen in the region as a % of GDP which could be seen as positive, although absolute levels of debt have increased; the HIPC might be seen as having removed a development barrier in Uganda and Tanzania where government spending (education, health) has started to rise. There is evidence in Fig 6 that countries are stuck with low value commodity exports (Uganda) but are dependent on importing technology and energy resources so terms of trade are poor. Commodity price changes / currency fluctuations might be seen as affecting stability in the region, and even demand (cut flowers in a recession) Figure 5 shows all countries have the potential to develop better services and industry (less so Kenya) <p>Political</p> <ul style="list-style-type: none"> Colonial legacy could be discussed, in relation to the conflicts that have plagued the 3 countries and often spill over their borders – stability is poor and the situation in Somalia and South Sudan looks set to continue – deters investment beyond mineral exploitation. Terrorism increases instability and deters investment (view 3) Considerable potential for internal conflict especially in Kenya which could destabilise the country and deters investment. Credit discussion of physical issues such as the landlocked status of Uganda making exports / imports difficult and even the nature of the highland terrain (see page 1). Governance and corruption score poorly (View 5), especially in Kenya (Fig 10 and 9) but are not good in Tanzania or Uganda and the whole region is weak in terms of democracy (Fig 11) with Kenya scoring the worst. <p>Synoptic linkages</p> <ul style="list-style-type: none"> Research into recent political and conflict events and into areas of the economy not covered in the RB e.g. tourism potential. Wider economic issues i.e. world trade (see View 1); View 4 may have been researched. Unit 1 globalisation, impact of climate change, Unit 3 Water Resources, models / theories of development. <p>To what extent:</p> <ul style="list-style-type: none"> Economic more significant than political or vice versa Differentiating between countries Some easing (debt) while others worsening (security / terrorism) 	

Level	Mark	Descriptor
Level 1	1-4	A few general ideas on problems facing the region with limited use of evidence. Structure is poor or absent. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Some explanation of some problems (unclear on eco / pol) and how these prevent development, with some use of the resources. Structure is satisfactory. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.

Level 3	9-12	Detailed explanation of political and economic issues, with some wider links, and begins to recognise that some issues are more serious than others. Structure is good. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-14	Detailed consideration of the extent to which political and economic issues affect stability and development potential with good synoptic links. Carefully structured. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number	Question
6c	
	Indicative content

The focus of the answer should be on risks and opportunities; these could be political, economic and even environmental or social. As this is a synoptic question, credit reference to other projects i.e. synoptic examples.

	Opportunities	Risks
EAF	<ul style="list-style-type: none"> Stronger political ties between countries which have not always had good relations could increase regional unity and reduce conflict potential (similar to EEC) Internal trade could grow as tariffs are reduced and a shared currency is introduced –creating jobs in transport and trade (could benefit landlocked Uganda especially) Could boost tourism as shared Visa is introduced The bloc has the potential to grow (but there is already argument about admitting Sudan and South Sudan). Creates a large, potentially powerful regional bloc with a large internal market of 142 million people and \$83 billion GDP. 	<ul style="list-style-type: none"> A similar EAC has already failed once, suggesting the political will may not be present Will such an IGO work in a region prone to corruption? Budget risks as payments to the shared EAC budget are slow (23% of agreed amount in 2011-12) Shared currencies have risks (Euro crisis) and shared legislatures could simply slow down critical decision making
LAPSET	<ul style="list-style-type: none"> Has the potential to drastically increase trade flows in and out of the region Could provide an export route for Uganda’s fledgling oil industry Jobs growth in ports and railroads Improved energy security for Kenya via South Sudan’s oil Could foster better political relations with countries to the north and west of Kenya. Opening up interior areas to development, avoiding core-periphery trap. 	<ul style="list-style-type: none"> Projects like this have become white elephants in the past (View 6) Finance is a risk – it could lead to debt, or if financed by e.g. China, it could lead to dependency and external influence. The project links to risky areas politically and geographically (South Sudan, Ethiopia) Tourism has already been dented (View 3) although it is important to the regions economy. Uganda and Tanzania may feel left out, although Uganda could benefit by easier export routes to Lamu. Environmental and social concerns in Lamu itself.

Synoptic linkages

- Unit 1 trade blocs / groupings; Unit 3 Energy security

Level	Mark	Descriptor
Level 1	1-4	Descriptive account which outlines some aspects of the project (s) but not in depth and ignores risks and opportunities. Structure is poor or absent. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Some pros and cons of both projects are explained using the resource booklet. Structure is satisfactory. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors. Max 8 if one project only.

Level 3	9-12	Detailed explanation of the opportunities and risks of both projects, with some evaluation and some wider links. Structure is good. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-14	Detailed evaluation of both risks and opportunities using the data and synoptic links. Provides a judgement. Carefully structured. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.