WJEC 2014 Online Exam Review

GCE Geography G3 Section A 1203-01

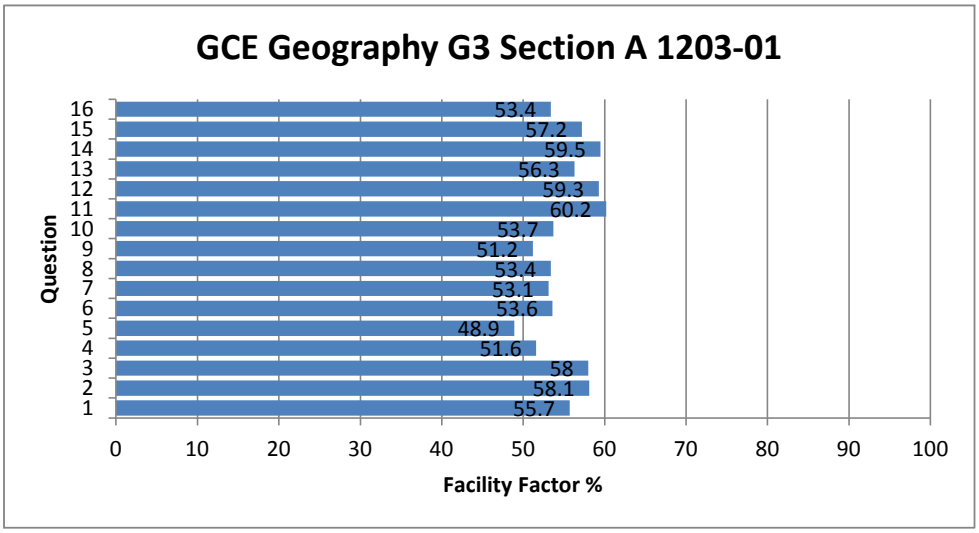
All Candidates' performance across questions

Question Title	N	Mean	S D	Max Mark	F F	Attempt %
1	241	13.9	4	25	55.7	9.3
2	239	14.5	4.2	25	58.1	9.2
3	304	14.5	5.5	25	58	11.7
4	208	12.9	5.8	25	51.6	8
5	541	12.2	4.1	25	48.9	20.9
6	576	13.4	4	25	53.6	22.2
7	197	13.3	4.8	25	53.1	7.6
8	288	13.4	4.2	25	53.4	11.1
9	682	12.8	3.7	25	51.2	26.3
10	549	13.4	3.6	25	53.7	21.2
11	590	15.1	3.9	25	60.2	22.7
12	165	14.8	3.7	25	59.3	6.4
13	184	14.1	3.9	25	56.3	7.1
14	190	14.9	4.1	25	59.5	7.3
15	156	14.3	3.9	25	57.2	6
16	69	13.4	3.8	25	53.4	2.7

4

6

14



SECTION A: CONTEMPORARY THEMES IN GEOGRAPHY

Answer **two** *questions,* **one** *question from questions 1 to 8 and* **one** *question from questions 9 to 16.*

Make the fullest possible use of examples in support of your answers.

Answer **one** *question from* **questions 1 to 8.**

Theme 2 Landforms and their Management

Glacial Environments

4. Describe the landforms and examine the processes associated with deglaciation. [25]

Question number

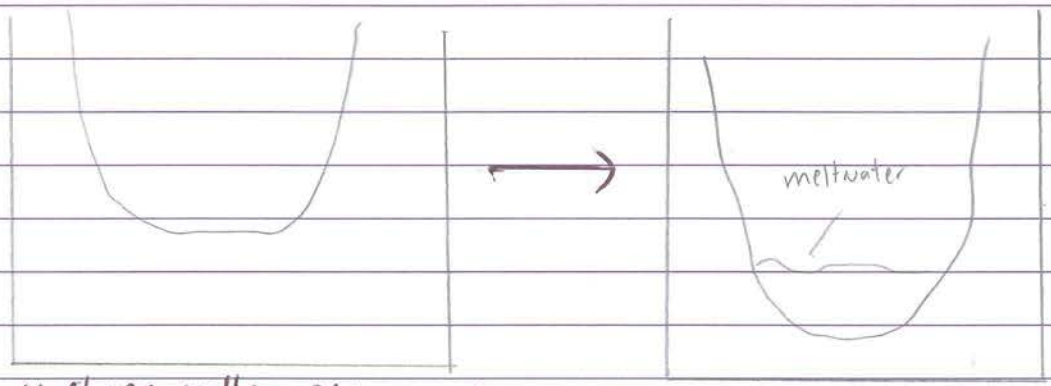
Leave Blank

04	Deglaciation refers to the process where there is a permanent reduction in the size of a glacier when ablation exceeds accumulation leading to a 'negative mass balance' emerging. This leaves previously glaciated areas uncovered and land becomes exposed. Deglaciation is caused by climatic fluctuations to which glacial environments respond to. We are currently in the Holocene epoch which is an interglacial period which was marked by temperature rising by almost 7°c in Greenland 11,500 years ago. Deglaciation gives rise to many landforms, some of which are alterations of pre-existing glacial landforms, which we can examine further.
	The first process associated with deglaciation is known as 'isostatic uplift'. This occurs when the large mass of glacial ice which previously overburdened an area of crust melts away and causes the crust to spring up or uplift. This is most prominent in areas where ice was at its thickest during a glacial period. This is well exemplified by the Eastern Hudson Bay region in Canada which was previously covered by the Cordilleran Ice sheet. Land is now uplifting at a rate of 1cm a year in this region, which is significant. In addition to this isostatic uplift has given rise to 'Raised Beaches' along the North Western coast of Scotland where land that previously lay at sea level is now 2-3m above it. Although the landforms created by isostatic uplift may be considered significant, we must appreciated that they are isolated in nature and therefore may not have a large effect on the landscape.
	Linked closely to isostatic uplift is the process of Eustatic change whereby a reduction in the size of a

Question number

Leave Blank

glacier due to an increased temperature during deglaciation leads to large outflows of meltwater into oceans. This causes a rise in sea levels globally which could threaten low lying areas. This process gives rise to a landform known as a 'Fjord' which is a glacial trough that has been filled with meltwater, these are commonly found in Norway and New Zealand. (figure1)



U-shape valley pre deglaciation

figure1

fjord formed after deglaciation

The process of eustatic change can be considered to be more significant than it's tectonic counterpart isostatic change, because rising sea levels having a global impact and may alter pre-existing glacial landforms

Although the above landforms and processes are significant we must also appreciate that ~~post~~ deglaciation may give rise to periglacial landforms and resultant processes. Once post-glacial meltwater has drained away, periglacial environments are left behind. These are areas where temperature fluctuates between 0°c and 4°c ~~and there is~~ which enables the formation of permafrost, (frozen ground). Periglacial areas today include the peaks of the Alps as well as areas in Arctic Russia.

Question number

Leave Blank

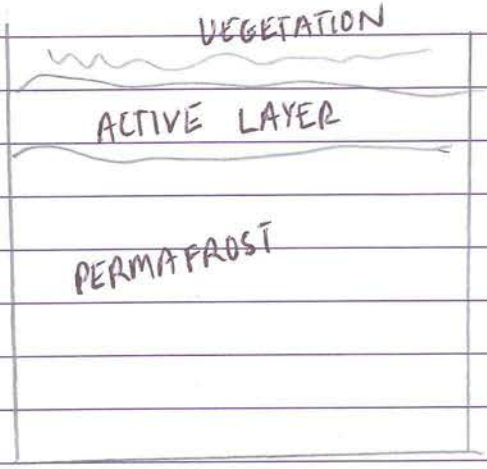
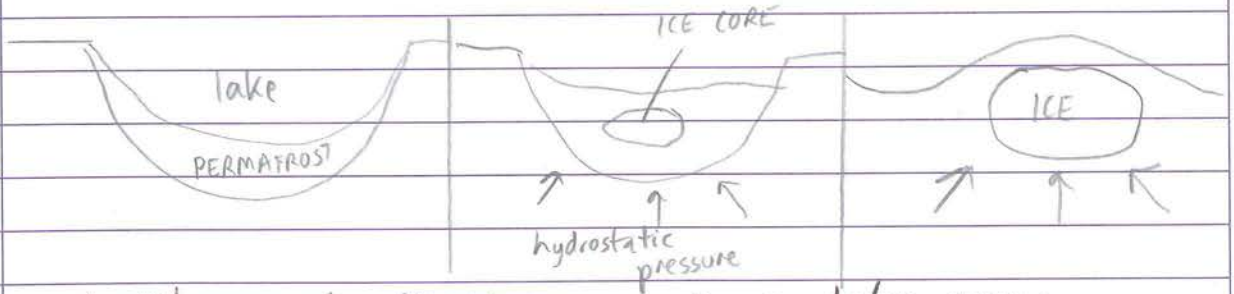


Figure 2

Although the permafrost alone is not too interesting, the active layer above it is what is pivotal in enabling periglacial processes and landforms. The active layer experiences a seasonal freeze and thaw which can give rise to various, frost cracking fluvial and freeze-thaw weathering processes and consequent landforms. Therefore we can examine the processes associated in periglacial environments and the resultant landforms.

The first fluvial landform that forms in a periglacial environment is that of a Pingo which is mound like circular hill which can have diameters of up to 60m. Closed system Pingos are formed under hydrostatic pressure in the active layer of the permafrost in a lake. The hydrostatic pressures result in the isolation, progressive infill

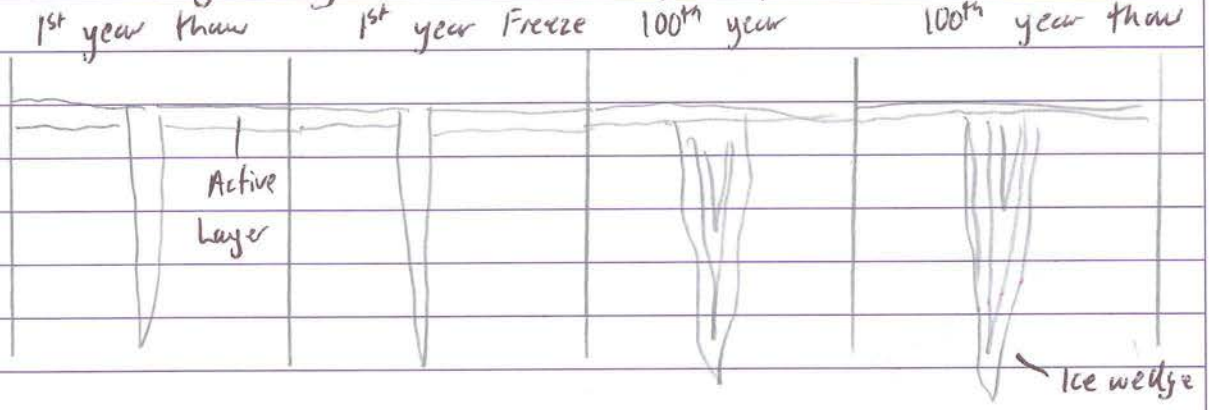


and subsequent disappearance of a lake forming a continually expanding ice which is eventually pushed up against the surface forming a pingo. We must acknowledge that the hydrostatic pressure in the active layer is the ~~pro~~ most important process and is greater in active layers which experience the most freezing-thawing.

Question number

Leave Blank

The next landform is that of an ice wedge which is formed via the process of frost cracking. It start when water seeps into a crack during a summer thaw and then freezes. However, as the 'freeze' season approaches the ice contracts and leaves space for another layer of ice to be formed This continuous layering of ice over a period of time gives rise to an Ice Wedge with Sprengsiandet in Norway being the best example of this.



We must acknowledge that this is a micro sized landform which could 100 years to reach even a metre in width showing that this process of frost cracking may not be too significant.

We also get landforms formed on slopes via the process of 'freeze-thaw' weathering which induces downward movement. Gelifluction refers to this downward slope mass movement and is most significant in areas where it snows for 6-8 months a year and then the thaw season results in the snow melting in a few days which overburdens the top soil inducing downward movement. This movement in low areas of relief gives rise to gelifluction sheets which are terrace like deposits. A number of laterally extended g.f sheets give rise to gelifluction lobe.

Question number

Leave Blank

To conclude, we ~~can~~ must appreciate that deglaciation gives rise to many new and altered landforms. However, the process associated with of it may vary in significance. For example the processes frost cracking and freeze thaw weathering discussed earlier give rise to very small landforms which take many years to form, therefore we may consider the processes associated with deglaciation to be insignificant. However, I feel that the significane of the processes of Isostatic uplift and especially Eustatic change are highly significant. This is because Eustatic change is globally felt and may have an effect on a varieby of glacial landforms ~~and~~ as well as those formed via fluvioglacial processes such as the destruction of areas of recessional moraine by increased meltwater discharge. This is why I feel that the processes associated with deglaciation are significant

Question number

Leave Blank

04

Deglaciation refers to the process where there is a permanent reduction in the size of a glacier when ablation exceeds accumulation leading to a 'negative mass balance' emerging. This leaves previously glaciated areas uncovered and land becomes exposed. Deglaciation is caused by climatic fluctuations to which glacial environments respond to. We are currently in the Holocene epoch which is an interglacial period which was marked by temperature rising by almost 7°c in Greenland 11,500 years ago. Deglaciation gives rise to many landforms, some of which are alterations of pre-existing glacial landforms, which we can examine further.

good intro

The first process associated with deglaciation is known as 'isostatic uplift'. This occurs when the large mass of glacial ice which previously overburdened an area of crust melts away and causes the crust to spring up or uplift. This is most prominent in areas where ice was at its thickest during a glacial period. This is well exemplified by the Eastern Hudson Bay region in Canada which was previously covered by the Cordilleran Ice sheet. Land is now uplifting at a rate of 1cm a year in this region, which is significant. In addition to this isostatic uplift has given rise to 'Raised Beaches' along the North Western coast of Scotland where land that previously lay at sea level is now 2-3m above it. Although the landforms created by isostatic uplift may be considered significant, we must appreciated that they are isolated in nature and therefore may not have a large effect on the landscape.

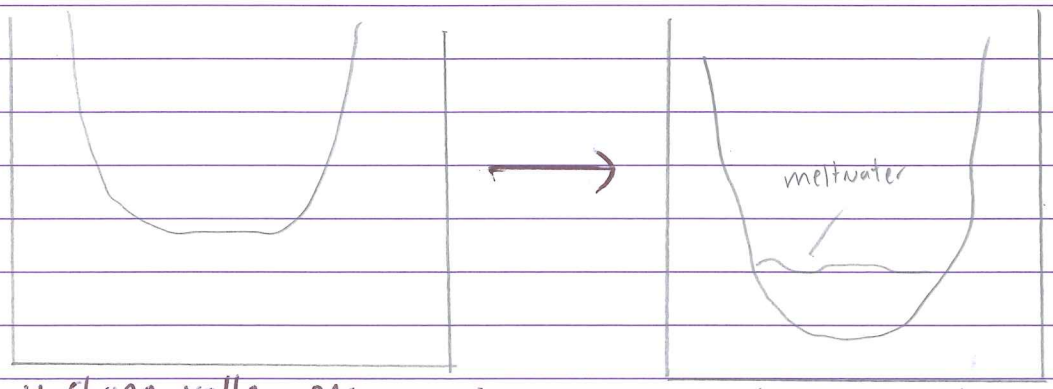
as

Linked closely to isostatic uplift is the process of Eustatic change whereby a reduction in the size of a

Question number

Leave Blank

glacier due to an increased temperature during deglaciation leads to large outflows of meltwater into oceans. This causes a rise in sea levels globally which could threaten low lying areas. This process gives rise to a landform known as a 'Fjord' which is a glacial trough that has been filled with meltwater, these are commonly found in Norway and New Zealand. (figure1)



U-shape valley pre deglaciation

figure1

fjord formed after deglaciation

good point

The process of eustatic change can be considered to be more significant than it's tectonic counterpart isostatic change, because rising sea levels having a global impact and may alter pre-existing glacial landforms

Although the above landforms and processes are significant we must also appreciate that ~~post~~ deglaciation may give rise to periglacial landforms and resultant processes. Once post-glacial meltwater has drained away, periglacial environments are left behind. These are areas where temperature fluctuates between 0°c and 4°c ~~and these is~~ which enables the formation of permafrost, (frozen ground). Periglacial areas today include the peaks of the Alps as well as areas in Arctic Russia.

Question number

Leave Blank

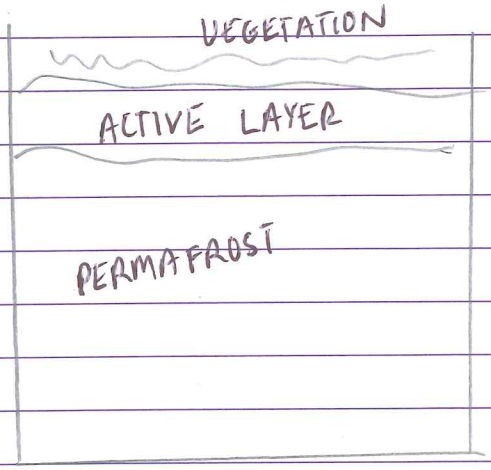
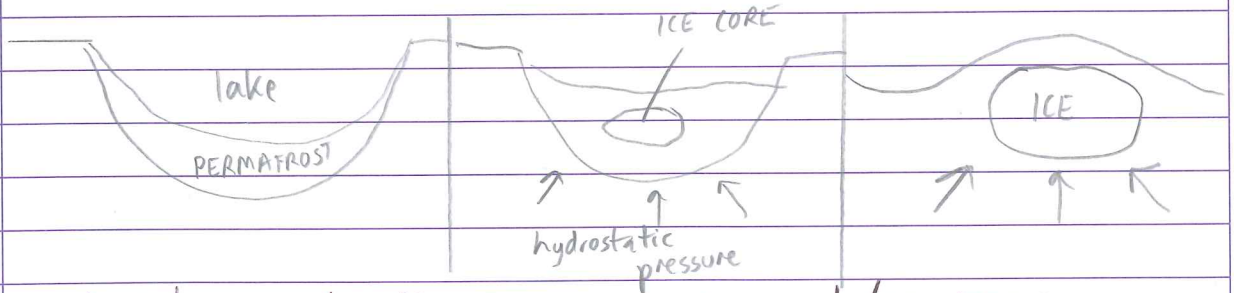


Figure 2

Although the permafrost alone is not too interesting, the active layer above it is what is pivotal in enabling periglacial processes and landforms. The active layer experiences a seasonal freeze and thaw which can give rise to various, frost cracking fluvial and freeze-thaw weathering processes and consequent landforms. Therefore we can examine the processes associated in periglacial environments and the resultant landforms.

The first fluvial landform that forms in a periglacial environment is that of a Pingo which is mound like circular hill which can have diameters of up to 60m. Closed system Pingos are formed under hydrostatic pressure in the active layer of the permafrost in a lake. The hydrostatic pressures result in the isolation, progressive infill



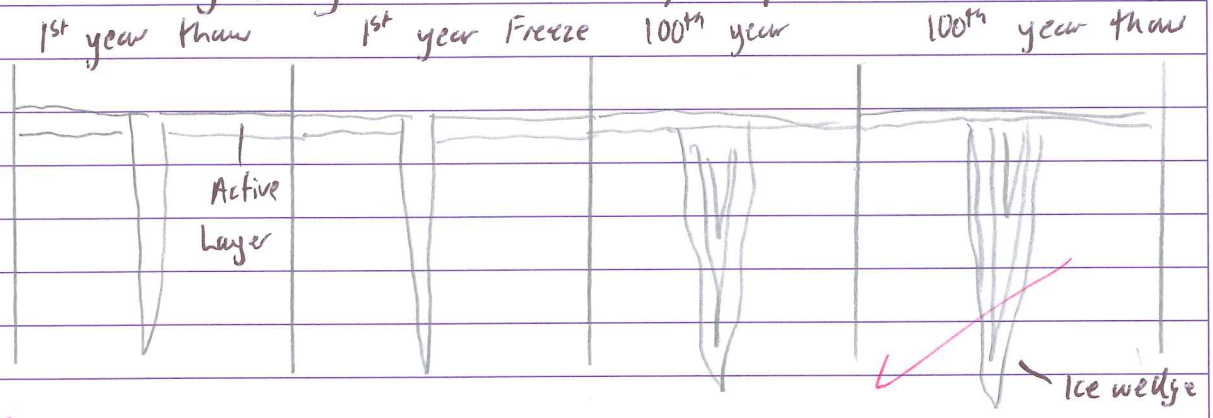
and subsequent disappearance of a lake forming a continually expanding ice which is eventually pushed up against the surface forming a pingo. We must acknowledge that the hydrostatic pressure in the active layer is the most important process and is greater in active layers which experience the most freezing-thawing.

process & example

Question number

Leave Blank

The next landform is that of an ice wedge which is formed via the process of frost cracking. It start when water seeps into a crack during a summer thaw and then freezes. However, as the 'freeze' season approaches the ice contracts and leaves space for another layer of ice to be formed This continuous layering of ice over a period of time gives rise to an Ice Wedge with Sprengsiandet in Norway being the best example of this.



We must acknowledge that this is a micro sized landform which could 100 years to reach even a metre in width showing that this process of frost cracking may not be too significant.

We also get landforms formed on slopes via the process of 'freeze-thaw' weathering which induces downward movement. Gelifluction refers to this downward slope mass movement and is most significant in areas where it snows for 6-8 months a year and then the thaw season results in the snow melting in a few days which overburdens the top soil inducing downward movement. This movement in low areas of relief gives rise to gelifluction sheets which are terrace like deposits. A number of laterally extended g.f sheets give rise to gelifluction lobe.

Question number

Leave Blank

To conclude, we ~~can~~ must appreciate that deglaciation gives rise to many new and altered landforms. However, the process associated with it may vary in significance. For example the processes of frost cracking and freeze thaw weathering discussed earlier give rise to very small landforms which take many years to form, therefore we may consider the processes associated with deglaciation to be insignificant. However, I feel that the significane of the processes of Isostatic uplift and especially Eustatic change are highly significant. This is because Eustatic change is globally felt and may have an effect on a varieby of glacial landforms ~~and~~ as well as those formed via fluvioglacial processes such as the destruction of areas of recessional moraine by increased meltwater discharge. This is why I feel that the processes associated with deglaciation are significant

Includes discussion / evaluation throughout.

Shows a high level of understanding and thorough & accurate knowledge. Well argued, expressed clearly

L5

25/25

SECTION A: CONTEMPORARY THEMES IN GEOGRAPHY

Answer **two** *questions,* **one** *question from questions 1 to 8 and* **one** *question from questions 9 to 16.*

Make the fullest possible use of examples in support of your answers.

Answer **one** *question from* **questions 1 to 8.**

Coastal Environments

6. Assess the importance of geology in the development of coastal landforms. [25]

Question number

Leave Blank

6. ~~The lithology of the~~ Many types of rock are present on the South Coast of England, ranging from very resistant rock such as chalk to poorly consolidated sands and gravels. These variations lead to the formation of very different landscapes and coastal landforms

The lithology of a coastal area contributes to the shape of the landscape, by determining the shape of cliffs. Resistant rocks, such as chalks and limestones lead to vertical cliffs, such as the White Cliffs of Dover. When softer rocks are present, such as Wealden clays with sedimentary rocks layered above them, the incidence of rotational slumping increases, leading a cliff with an angle of between 30° and 60° from the sea.

~~The~~ The lithology also controls what coastal landforms can form in the area, fulfilling an important role. However, it does not control how the landforms are created; this role lies with erosional and depositional processes. Bays and headlands are characteristic features of discordant coastlines. Here, are subsequent layers and bands of less resistant and more resistant rock. Erosional forces can act more strongly on the less resistant rock, so these bands are eroded much more quickly, leaving headlands made of harder rock behind them, forming bays. This can be seen in Dorset, England, where Hengistbury Head separates Poole Harbour and Christchurch Bay. On headlands, erosional processes, such as hydraulic action and abrasion can occur to form coastal microfeatures, such as

Question number

Leave Blank

caves stacks and stumps. ~~These processes work~~ by Hydraulic action works by filling spaces in the rock surface, compressing the air inside the gaps until the pressure builds to too high a level to be contained, causing small explosions within the rock. This disrupts the internal structure of the rock, making it less resistant to the other erosional forces present. Abrasion then uses carried sediment to scrape the rock surface, dislodging large pieces of rock, which can in turn be used to break off more pieces. These processes combined with others allow cracks and faults in the rock to be exploited, and eroded to form caves and arches through to stacks and stumps, such as Old Harry and Harry's Wife in Dorset, England. The geology of the area controls where erosion occurs ~~most~~ at the highest rate, but ~~not where~~ it also has a bearing on what types of landforms will form. For instance, poorly consolidated sands and gravels will never form a stack, as they are eroded too quickly and easily by the sea, but more resistant rocks will, over 100s of years, be eroded to form erosion microfeatures. In this ways, geology does have an important role

However, in depositional landforms, such as spits, such as Hurst Castle Spit again in Dorset, geology has a very minor role to play, as it is only important in designating what type of sediment is available to be used in the construction of the depositional landforms. So, in ~~less~~ less areas of less consolidated rock, there will be more sediment available for construction than in areas of highly resistant rocks. This can be seen in the particles that make up

Question number

Leave Blank

Hurst Castle spit, as it is a pebble 'beach', with larger rougher pebbles near the mainland, and finer, smaller pebbles at the tip. This is evidence of longshore drift, a transportation process whereby beach sediment is transported along the coastline within individual littoral cells. Geology does control the size of the sediment though, as even in small, individual pieces of rock, there are slight differences in internal cohesion, controlling the rate at which the pebble is eroded down.

The South coast of England is a World Heritage Site, as it forms the Jurassic Coast. It is mostly made up of sedimentary rocks, allowing an abundance of fossils to be found within the cliffs. Lulworth Cove is a famous landmark on the coastline, and is a perfect example of how geology can shape the land. The cove is situated on a section of concordant coastline, with very resistant Massive Portland limestone at the front, then Wealden clays, purbeck beds and chalk as you move further back inland. Chalk and limestone are very resistant rocks, while purbeck beds and wealden clays are poorly consolidated and easily eroded. The formation of this landmark started with a glacial stream, which weakened the external limestone, and allowed the sea to start exploiting the weakness in the rock. Over 1000s of years, the outer limestone was slowly eroded, until the sea water broke through to the less consolidated rocks. The rate at which these lithologies can be eroded allowed the characteristic shape of Lulworth Cove to form, the semi-circular

Question number | Leave Blank

as the more resistant chalk stopped the relatively quick erosion inland, causing more lateral erosion. The geology present had a large and important role to play in the formation of Lulworth Cove, as it controlled the direction and rate of different parts of the feature.

Overall, in the formation and development of landform, geology has the underlying control of the whole system. It controls what formations can form and where they can form. It even controls the rate and direction the erosion processes take. In this way it is very important. However, in depositional processes, such as the formation of spits, it has almost no control, and as such becomes an underlying factor.

Question number

Leave Blank

6. ~~The lithology of the~~ Many types of rock are present on the South Coast of England, ranging from very resistant rock such as chalk to poorly consolidated sands and gravels. These variations lead to the formation of very different landscapes and coastal landforms.

The lithology of a coastal area contributes to the shape of the landscape, by determining the shape of cliffs. Resistant rocks, such as chalks and limestones lead to vertical cliffs, such as the White Cliffs of Dover. When softer rocks are present, such as Wealden clays with sedimentary rocks layered above them, the incidence of rotational slumping increases, leading a cliff with an angle of between 30° and 60° from the sea. Sound - could say why

~~The~~ The lithology also controls what coastal landforms can form in the area, fulfilling an important role. However, it ~~does~~ does not control how the landforms are created; this role lies with erosional and depositional processes. Bays and headlands are characteristic features of discordant coastlines. Here, are subsequent layers and bands of less resistant and more resistant rock. Erosional forces can act more strongly on the less resistant rock, so these bands are eroded much more quickly, leaving headlands made of harder rock behind them, forming bays. This can be seen in Dorset, England, where Hengistbury Head separates Poole Harbour and Christchurch Bay. ~~On~~ On headlands, erosional processes, such as hydraulic action and abrasion can occur to form coastal microfeatures, such as

OK

detail of Lith?

Question number

Leave Blank

caves stacks and stumps. ~~These processes work~~ by Hydraulic action works by filling spaces in the rock surface, compressing the air inside the gaps until the pressure builds to too high a level to be contained, causing small explosions within the rock. This disrupts the internal structure of the rock, making it less resistant to the other erosional forces present. Abrasion then uses carried sediment to scrape the rock surface, dislodging large pieces of rock, which can in turn be used to break off more pieces. These processes combined with others allow cracks and faults in the rock to be exploited, and eroded to form caves and arches through to stacks and stumps, such as Old Harry and Harry's Wife in Dorset, England. The geology of the area controls where erosion occurs ~~most~~ at the highest rate, but ~~not where~~ it also has a bearing on what types of landforms will form. For instance, poorly consolidated sands and gravels will never form a stack, as they are eroded too quickly and easily by the sea, but more resistant rocks will, over 100s of years, be eroded to form erosion microfeatures. In this ways, geology does have an important role.

However, in depositional landforms, such as spits, such as Hurst Castle Spit again in Dorset, geology has a very minor role to play, as it is only important in designating what type of sediment is available to be used in the construction of the depositional landforms. So, in ~~less~~ areas areas of less consolidated rock, there will be more sediment available for construction than in areas of highly resistant rocks. This can be seen in the particles that make up

Question number

Leave Blank

Hurst Castle spit, as it is a pebble 'beach', with larger rougher pebbles near the mainland, and finer, smaller pebbles at the tip. This is evidence of longshore drift, a transportation process whereby beach sediment is transported along the coastline within individual littoral cells. Geology does control the size of the sediment though, as even in small, individual pieces of rock, there are slight differences in internal cohesion, controlling the rate at which the pebble is eroded down.

Critical analysis

could develop

The South coast of England is a World Heritage Site, as it forms the Jurassic Coast. It is mostly made up of sedimentary rocks, allowing an abundance of fossils to be found within the cliffs. Lulworth Cove is a famous landmark on the coastline, and is a perfect example of how geology can shape the land. The cove is situated on a section of concordant coastline, with very resistant Massive Portland limestone at the front, then Wealden clays, purbeck beds and chalk as you move further back inland. Chalk and limestone are very resistant rocks, while purbeck beds and wealden clays are poorly consolidated and easily eroded. The formation of this landmark started with a glacial stream, which weakened the external limestone, and allowed the sea to start exploiting the weakness in the rock. Over 1000s of years, the outer limestone was slowly eroded, until the sea water broke through to the less consolidated rocks. The rate at which these lithologies can be eroded allowed the characteristic shape of *Lulworth Cove to form, *the semi-circular

clear

Question number | Leave Blank

as the more resistant chalk stopped the relatively quick erosion inland, causing more lateral erosion. The geology present had a large and important role to play in the formation of Lulworth Cove, as it controlled the direction and rate of different parts of the feature.

Overall, in the formation and development of landform, geology has the underlying control of the whole system. It controls what formations can form and where they can form. It even controls the rate and direction the erosion processes take. In this way it is very important. However, in depositional processes, such as the formation of spits, it has almost no control, and as such becomes an underlying factor.

21

has addressed the question and tried to assess in a variety of environments. Brings the argument back to geology all the time. Some more detail could be given on process but a confident analysis.

L4 L5 21/25

A mature and analytical response although additional detail of lithological/structural controls could be provided in places, the quality of K+U demonstrated & the sustained assessment element are sufficient to take the response to L5.

Answer **one** *question from* **questions 9 to 16**.

Theme 6 Emerging Asia

China

14. 'Achieving a balance between economic growth and sustainable development in China is problematic.' Discuss. [25]

END OF PAPER

Question number

Leave Blank

14

China is now the world's second largest economy with a nominal GDP of $9.725 trillion only second to the USA. They have experienced decades of double digit economic growth which has undoubtedly been an economic success, but, have they been able to balance this monumental growth with sustainable development? We can asses sustainable development by looking at environmental/social change.

A key change in China's economy was Deng Xiaoping's 'Open Door Policy' in 1979 which opened up China to the rest of the world whilst reforming the internal make up of the country. There were reforms to the SOEs which meant that inefficient ones were allowed to go bust, enforcing the principle of 'Creative Destruction'. Although some may argue that this promoted economic efficiency; it also created large problems for urban communities. At the same time that TVEs were reformed, so was the housing system under the 'housing reform act' 1988 which led to the privatisation of housing. This meant that some people had lost jobs in SOEs whilst having to deal with paying private money for housing which previously would have been provided by the state. This meant that a large population of people experienced a fall in living standards with around 1.8 million families being forced to live in housing which is less than 4m² in size. Showing how a balance between economic growth and development of sustainable urban ~~the~~ housing has not been met having an ~~social~~ impact on social sustainable development.

The next conflict arising is through the environmental degradation that the nation has received in its pursuit of 'economic growth at all costs'. The Huai River has a drainage area of around 174,000 km meaning that its water supply is depended

Question number

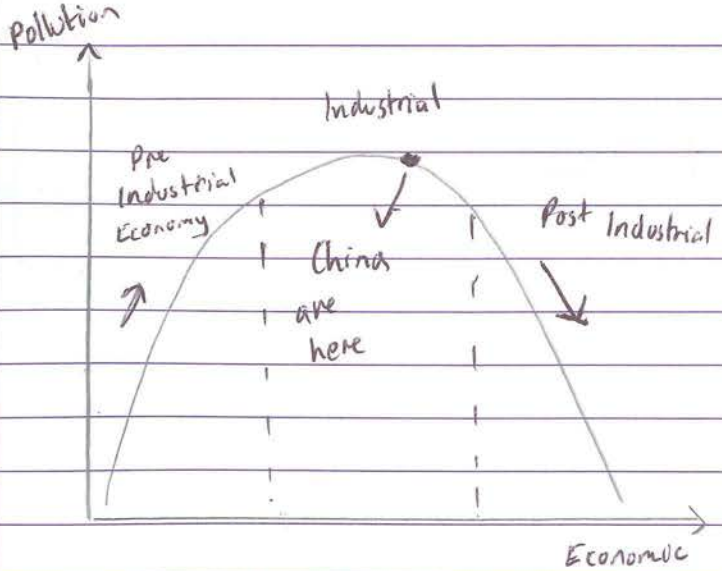
Leave Blank

upon by a large number of people. In 2005, the Chinese govt rejected plans to build 85 new water treatment centres along the river on the grounds that it was not in line with productive economic investment. This ~~direct~~ shows a direct situation in which China sustainable development has been shown to be problematic and the Chinese choosing to opt for economic growth. This has consequently led to industry accounting for 94.2% of all ammonia nitrate in the river which puts the drinking water of some 100 million people in jeopardy, which is not sustainable, considering the health implications that this could have. In addition to this ~~the~~ govt invested $227 million in new water treatment plants which some may view to be ~~sust~~ attempts to increase sustainability. However, I feel that the amount of environment pollution should be curtailed via compulsory legislation as oppose to trying to repair the damage once it is done. But there have been attempts by the govt to promote sustainable development ~~by~~ recently in the form of the 'Take Black hat off' campaign whereby they closed 12 inefficient power stations and installed millions of solar panels to factories in the area of Linfen. A more important component of legislation that they introduced was to tie the promotion prospects of govts officials to ~~the~~ meeting certain environmental standards which may be seen as a way to balance economic growth and sustainable environment in the long run. But there is no doubt that up til now, the balance between economic growth and environmental sustainable development has been a huge problem.

Question number

Leave Blank

What may have caused the biggest problem for the Chinese was the rate at which they grew and not so much the magnitude of growth. From 1976 to 2007 the urban population as a percentage of the population increase from 7% to 41% due to the flood of workers (rural migrants) to take up jobs to fuel the growth. This has had a huge social and environmental impact by the virtue of the 'urban sprawl' in China. This is well exemplified by the growth in ~~population~~ area of Shanghai by 486% from 1985 - 1995 which has led to a loss in cultivatable land equivalent to a 33% per capita loss in rural land. This ~~has been e~~ sprawl has been exacerbated by the lack of coordination between local and state govts who have conflicting objectives on how the land is allocated. Ultimately the urban sprawl induced by policies which promoted economic can be seen to have a long term effect on the sustainable food supply of urban areas. This is because populations are going up and agricultural land is going down meaning that if this continues, there could be famines which ~~is a feature~~ can be considered to be highly sustainable.



Kuznets Curve

To conclude I feel that there is conclusive evidence to suggest that the Chinese have been unable to balance economic growth and ~~environmental~~ sustainable development.

Question number

Leave Blank

However, the Kuznets curve illustrated shows that it is common for most economies to grow environmentally unsustainably as most economies tend to start off as industrial economies leading to high levels of pollution. This means that although ~~environme~~ the Chinese may be environmentally unsustainable; this may not be too problematic when taking a holistic view of other economies such as UK during the industrial revolution. However, the ~~negat~~ unsustainable development of urban communities in particular is cause for concern. I feel the root cause of this has been the 'political' structure of the nation whereby there is a lack of policy harmonisation between local and central govts has led to policies that conflict rather complement each other being implemented. Although there has been a lack of balance between economic growth and general sustainable development thus far the Chinese future may be brighter. The 10th five year plan from 2001 - 2005 of Xiaokang relates to an all round better society with environmental sustainability being a main pillar, which means that sustainable development could improve.

Question number	Leave Blank
14	China is now the world's second largest economy with a nominal GDP of $9.725 trillion only second to the USA. They have experienced decades of double digit economic growth which has undoubtedly been an economic success, but, have they been able to balance this monumental growth with sustainable development? We can asses sustainable development by looking at environmental/social change //A key change in China's economy was Deng Xiaoping's 'Open Door Policy' in 1979 which opened up China to the rest of the world whilst reforming the internal make up of the country. There were reforms to the SOEs which meant that inefficient ones were allowed to go bust, enforcing the principle of 'Creative Destruction'. Although some may argue that this promoted economic efficiency; it also created large problems for urban communities. At the same time that TVEs were reformed, so was the Housing System under the 'housing reform act' 1988 which led to the privatisation of housing. This meant that some people had lost jobs in SOEs whilst having to deal with paying private money for housing which previously would have been provided by the state. This meant that a large population of people experienced a fall in living standards with around 1.8 million families being forced to live in housing which is less than 4m² in size. Showing how a balance between economic growth and development of sustainable urban ~~the~~ housing has not been met having an ~~social~~ impact on social sustainable development. The next conflict arising is through the environmental degradation that the nation has received in its pursuit of 'economic growth at all costs'. The Huai River has a drainage area of around 174,000 km meaning that its water supply is depended

Question number

Leave Blank

water

upon by a large number of people. In 2005, the Chinese govt rejected plans to build 85 new water treatment centres along the river on the grounds that it was not in line with productive economic investment. This ~~direct~~ shows a direct situation in which China sustainable development has been shown to be problematic and the Chinese as a result choosing to opt for economic growth. This has consequently led to industry accounting for 94.2% of all ammonia nitrate in the river which puts the drinking water of some 100 million people in jeopardy, which is not sustainable, considering the health implications that this could have. In addition to this ~~the~~ govt invested $227 million in new water treatment plants which some may view to be ~~sust~~ attempts to increase sustainability. However, I feel that the amount of environment pollution should be curtailed via compulsory legislation as oppose to trying to repair the damage once it is done. But there have been attempts by the govt to promote sustainable development ~~by~~ recently in the form of the 'Take Black hat off' campaign whereby they

air

closed 12 inefficient power stations and installed millions of solar panels to factories in the area of Linfen. A more important component of legislation that they introduced was to tie the promotion prospects of govts officials to ~~the~~ meeting certain environmental standards which may be seen as a way to balance economic growth and sustainable environment in the long run. But there is no doubt that up til now, the balance between economic growth and environmental sustainable development has been a huge problem.

Question number

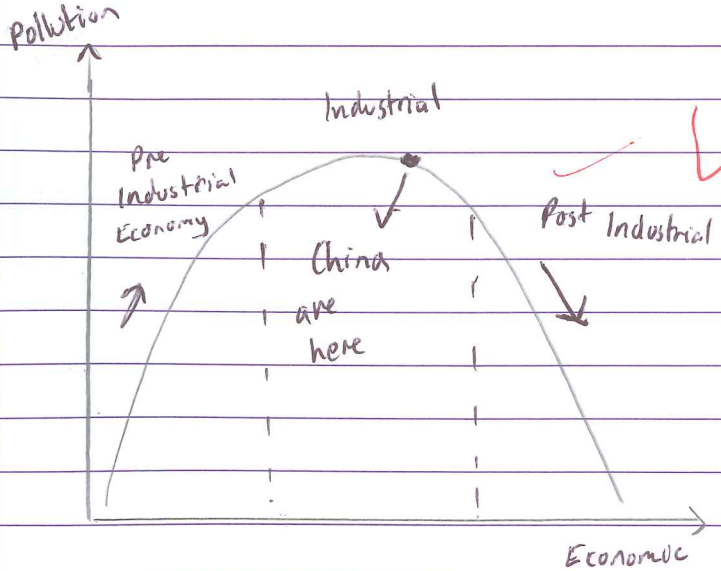
Leave Blank

cut

discuss

What may have caused the biggest problem for the Chinese was the rate at which they grew and not so much the magnitude of growth. From 1976 to 2007 the urban population as a percentage of the population increase from 7% to 41% due to the flood of workers (rural migrants) to take up jobs to fuel the growth. This has had a huge social and environmental impact by the virtue of the 'urban sprawl' in China. This is well exemplified by the growth in ~~population~~ area of Shanghai by 486% from 1985 - 1995 which has led to a loss in cultivatable land equivalent to a 33% per capita loss in rural land. This ~~has been e~~ sprawl has been exacerbated by the lack of coordination between local and state govts who have conflicting objectives on how the land is allocated. Ultimately the urban sprawl induced by policies which promoted economic can be seen to have a long term effect on the sustainable food supply of urban areas. This is because populations are going up and agricultural land is going down meaning that if this continues, there could be famines which ~~is a feature~~ can be considered to be highly sustainable.

agric.



Kuznets Curve

To conclude I feel that there is conclusive evidence to suggest that the Chinese have been unable to balance economic growth and ~~environmental~~ sustainable development.

Question number

Leave Blank

However, the Kuznets curve illustrated shows that it is common for most economies to grow environmentally unsustainably as most economies tend to start off as industrial economies leading to high levels of pollution. This means that although ~~environme~~ the Chinese may be environmentally unsustainable; this may not be too problematic when taking a holistic view of other economies such as UK during the industrial revolution. However, the ~~negat~~ unsustainable development of urban communities in particular is cause for concern. I feel the root cause of this has been the 'political' structure of the nation whereby there is a lack of policy harmonisation between local and central govts has led to policies that conflict rather complement each other being implemented. Although there has been a lack of balance between economic growth and general sustainable development thus far the Chinese future may be bright. The 10th five year plan from 2001 - 2005 of Xiaokang relates to an all round better society with environmental sustainability being a main pillar, which means that sustainable development could improve.

Uses discussion of a high order to lead the essay with a range of illustrative issues / data. Credit the quality of comment.

L5 (25)