Marking Schemes

Paper 1
Section A

Question No.	Key	Question No.	Key
1.	C (61%)	21.	C (47%)
2.	B (67%)	22.	A (39%)
3.	B (36%)	23.	C (93%)
4.	C (38%)	24.	D (55%)
5.	B (67%)	25.	D (66%)
6.	B (33%)	26.	D (41%)
7.	C (71%)	27.	B (85%)
8.	C (81%)	28.	D (65%)
9.	A (77%)	29.	A (78%)
10.	B (74%)	30.	A (59%)
11.	A (59%)	31.	D (32%)
12.	D (42%)	32.	C (92%)
13.	A (82%)	33.	B (47%)
14.	D (58%)	34.	C (86%)
15.	B (65%)	35.	A (74%)
16.	C (73%)	36.	A (69%)
17.	B (60%)	37.	D (58%)
18.	C (58%)	38.	A (71%)
19.	D (79%)	39.	D (45%)
20.	A (63%)	40.	B (52%)

Note: Figures in brackets indicate the percentages of candidates choosing the correct answers.

This document was prepared for markers' reference. It should not be regarded as a set of model answers. Candidates and teachers who are not involved in the marking process are advised to interpret its content with care.

Section B

Question 1 **Marks**

(a) (i)
- coastal landform X: beach — 1
- coastal landform Y: sea arch/ sea cave — 1 (2)

(ii) Correctly placed annotations:
- line of weakness/ joints/ faults — 1
- destructive wave — 1
- wave erosion/ hydraulic action/ abrasion — 1
- forming sea caves — 1
- at the headland — 1
- sea caves enlarged/ deepened/ widened — 1 (4)
- sea caves breaking through/ forming sea arch — 1 (1)

(iii)
- site 3: wave deposition — 1 (1)

Explanation	Evidence	
- sheltered site/ dispersed wave energy	- bay/ Pak Lap Wan	1+1
- small wave energy/ weak wave	- low wind speed/ wind speed 1.7 m per sec/ low wave frequency/ frequency: 8 per min	1+1
- gentle offshore gradient/ shallow water/ constructive wave	- widely spaced submarine contour lines/ depth below 5 m	1+1 (2)

- site 4: wave erosion — 1 (1)

Explanation	Evidence	
- exposed site/ concentrated wave energy	- headland	1+1
- large wave energy/ strong wave	- strong wind/ wind speed 9.2 m per sec/ high wave frequency/ frequency: 14 per min	1+1
- steep offshore gradient/ deep water/ destructive wave	- densely spaced submarine contour lines/ depth 5 – 10 m	1+1 (2)

(**No marks** for just copying data from question without explanation.)

(b) Marking criteria:

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of arguments; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.

- Candidates should refer to the following perspectives when discussing the reasons for and against the development of site 2 into a holiday resort: (Max. 5)
  - Reasons for (Max. 3): low land rent/ presence of flatland/ scenery/ sites for recreational activities/ other reasonable arguments
  - Reasons against (Max. 3): inconvenient transport/ lack of facilities/ impact on natural environment/ impact on human activities/ other reasonable arguments
- **2 marks** for discussing any perspective with **detailed description and explanation**
  - *Examples:*
    - *Land rent is low as the site is remote.*
    - *Transport is inconvenient with only footpath connecting to the secondary road with restricted access.*
    - *Flat land is available as contour lines are widely-spaced.*
    - *Low cost of development/construction as flat land is available.*
- **1 mark** for discussing any perspective with **brief description or explanation only**
  - *Examples:*
    - *Land rent is low.*
    - *Transport is inconvenient.*

Max. 18

Question 2 **Marks**

(a) (i)
- coastal location 1
- easy for import and export 1
- more flat land/ most land below 200 m/ lowland 1
- railway/ highway nearby/ convenient transport/ lower transport costs 1
- proximity to iron ore/ coal/ raw materials/ energy 1
- water for cooling from river 1
- long history of development 1 (4)

(ii)
- located at southwestern part of China/ interior region, remote location/ inaccessible 1,1
- higher altitude/ most land between 1 000 m and 1 600 m, unfavourable for transportation 1,1
- rugged relief, lack of flat land for development 1,1 (2)

(iii)
- driven by government policy 1
- balancing economic development/ population distribution between the interior and coastal regions 1
- increasing job opportunities/ raising living standard in the interior region/ increasing income 1
- lowering risk of iron and steel plants being attacked/ strategic consideration 1
- better utilisation of raw materials in the interior region 1 (2)

(b) (i)

According to Table 2d:
- rising trend for amount of imported iron ore 1
- rising trend for amount of imported coal 1
- iron and steel plants can be relocated to coastal areas 1
- imported raw materials easily obtained/ lowering transport costs 1

According to statement in (b):
- advancement in technology 1
- weaker locational pull of raw material on iron and steel industry 1
- becomes market-oriented/ close to markets 1
- close to cities 1 (5)

(ii) Marking criteria:

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of arguments; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.

- Candidates could discuss the reasons for/ against iron and steel plant B to change and not change in location or both (Max. 5)
- No change in location:
  - industrial inertia
  - e.g. industrial linkages/ skilled labour/ other reasonable arguments
- Reasons for relocation:
  - reducing production costs
  - closer to coastal industrial belts
  - other reasonable arguments
- **2 marks** for **detailed description and discussion**
  - *Example (against): High relocation cost induced because machinery used in iron and steel industry is heavy and bulky.*
  - *Example (for): Industry would be relocated to coastal cities to enjoy agglomeration economies.*
- **1 mark** for **brief description only**
  - *Example (against): High relocation cost.*
  - *Example (for): Relocated to coastal cities.*

Max. 18

Question 3 **Marks**

(a)
- lowland/ land below 500 m/ flatland 1
- snow melt water from mountains 1
- presence of river channels/ aqueduct/ canal 1
- water supply for irrigation 1
- warm/ monthly temperature above 0°C/ long frost-free period 1
- long growing season/ farming all year round 1 (4)

(b) (i)
- low/ inadequate annual rainfall 1
- uneven distribution of rainfall/ low rainfall in summer 1
- high evaporation 1
- drought/ arid/ dry soil 1
- lack of water/ water shortage 1 (3)

(ii) Reasons for: (At least 2)
- more/ more stable water supply (throughout the year) 1
- longer growing season/ more arable land 1
- more choices of agricultural produce 1
- higher yield/ farming intensity/ land productivity/ crop quality 1
- higher income 1

Reasons against: (At least 2)
- high water consumption/ high evaporation of irrigation water/ high water wastage 1
- over-irrigation 1
- salinization 1
- water table rises/ speeds up evaporation 1
- accelerates capillary action 1 (6)

(c) Marking criteria:

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of arguments; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.

- Candidates should refer to the following perspectives when evaluating the effectiveness of precision farming: (Max.5)
  - the operation of precision farming: accuracy
  - the advantages of precision farming
  - evaluation should be related to climatic constraints
- **2 marks** for evaluating any perspective with **detailed description and explanation**
  - *Example (for): Understanding of soil moisture content with the help of GIS and GPS.*
  - *Example (for): More accurate control over amount of irrigation water, lower water wastage/ consumption.*
  - *Example (against): Precision farming does not change the climatic conditions, for example, rainfall is not increased.*
  - *Example (against): Climatic hazards related to temperature still exist, for example, hill fire/ frost.*
- **1 mark** for evaluating any perspective with **brief description or explanation only**
  - *Example (for): Farming productivity increased.*
  - *Example (against): Precision farming cannot avoid the occurrence of drought.*
- **No marks** for merely mentioning effective or ineffective without elaboration

Max. 18

Question 4 **Marks**

(a) (i)
- hot climate/ high mean annual temperature 1
- wet/ humid climate/ high annual rainfall 1
- small annual range of temperature 1
- no significant cold/ dry season/ small seasonal differences 1 (2)

(ii)
- hot and wet all year round/ long growing season 1
- luxuriant and dense vegetation 1
- broad leaf/ waxy leaf 1
- buttress roots/ thick trunks 1
- epiphytes/ climbers/ lianas 1
- high species diversity 1
- evergreen 1
- layered structure/ tall trees 1
- presence of drip-tips 1
- to shed excess rainwater 1 (6)

(b)
- commercial logging/ deforestation/ removal of vegetation/ use of heavy machinery 1

Impact on soil:
- soil erosion 1
- leaching intensified/ soil more infertile 1
- soil compaction/ lower soil moisture content/ formation of hardpan 1

Impact on biosphere:
- decrease in biomass/ vegetation density/ destruction of layered structure 1
- destruction of habitat 1
- lower biodiversity 1

Other impact:
- changes in micro-climate 1
- changes in water cycle 1 (5)

(c) Marking criteria:

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of arguments; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.

- Candidates should refer to the following perspectives when evaluating the effectiveness of selective logging in conserving the tropical rainforest: (Max. 5)
  - Practice: only certain species, age and size of trees are allowed to be cut
  - Reasons for being effective: small affected area/ protecting non-economic species/ allows regeneration of forest
  - Factors affecting effectiveness: level of administration/ level of monitoring/ financial ability/ technological level/ other supporting measures, such as cutting climbers and lianas
- **2 marks** for evaluating any perspective with **detailed description and explanation**
  - *Example (for): Selective logging cuts only certain species of trees, so the size of area affected can be reduced.*
  - *Example (for): Size of affected area is reduced, which allows shorter time for forest regeneration.*
  - *Example (against): High cost induced by planning/ searching lowers loggers' profits.*
  - *Example (against): Hard to control illegal logging due to high cost of monitoring.*
- **1 mark** for evaluating any perspective with **brief description or explanation only**
  - *Example (for): Less destruction brought to the forest.*
  - *Example (against): Hard to control illegal logging.*

Max. 18

Section C

Question 5

Describe and explain the tectonic activities in the Himalayan region. Discuss how these tectonic activities bring opportunities and challenges to the region.

Description & explanation	6
Discussion	6

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of discussion; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.
3. Award appropriate marks to **relevant and reasonable answers** not included in this marking scheme.

Generic Marking Guidelines Performance of Candidates	Marks
Describe and explain the tectonic activities in the Himalayan region	
• Demonstrate comprehensive knowledge of the Himalayan region - located at destructive/ convergent plate boundary - located between the Indo-Australian Plate and the Eurasian Plate • Accurate description and explanation of the tectonic activities in the region - destructive plate boundary/ collision of the Indo-Australian Plate and the Eurasian Plate/ no subduction/ sedimentary rocks between plates compressed/ sedimentary rocks folded and uplifted/ forming the Himalayan region - plates compressed/ pressure accumulated/ release of pressure/ causing intense earthquake in the Himalayan region • Extensive and accurate use of geographical terminology	6
• Demonstrate adequate knowledge of the Himalayan region • Appropriate description and explanation of the tectonic activities in the region • Accurate use of geographical terminology	3 – 5
• Demonstrate elementary knowledge of the Himalayan region • Brief description and explanation of the tectonic activities in the region • Absence or inaccurate use of geographical terminology	1 – 2
Discuss how these tectonic activities bring opportunities and challenges to the region	
• Coherent and logical discussion of how these tectonic activities bring opportunities and challenges to the region - Opportunities: (Max. 3 marks) • attracting scientists from all over the world to study mountain science • attracting mountaineering experts to climb the earth's summit • attracting tourists from all over the world, promoting tourism • providing job opportunities to local people, enhancing economic development - Challenges: (Max. 3 marks) • altitude too high/ hilly relief, thin air, cold climate • inconvenient transport • industrial, agricultural development hindered • earthquakes/ avalanches triggered by earthquakes bring casualties, economic losses • Extensive and accurate use of geographical terminology	6
• Appropriate discussion of how these tectonic activities bring opportunities and challenges to the region • Accurate use of geographical terminology	3 – 5
• Brief or limited discussion of how these tectonic activities bring opportunities and challenges to the region • Absence or inaccurate use of geographical terminology	1 – 2
	Max. 12

Question 6

Describe and explain the housing problems in Hong Kong. Discuss whether developing the green belts is an effective way to solve the housing problems.

Description & explanation	6
Discussion	6

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of discussion; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.
3. Award appropriate marks to **relevant and reasonable answers** not included in this marking scheme.

Generic Marking Guidelines	
Performance of Candidates	**Marks**
Describe and explain the housing problems in Hong Kong	
• Demonstrate comprehensive knowledge of the major causes of housing problems in Hong Kong • Answers may include the following descriptions and explanations: - the city grows and expands over time - housing problems: insufficiency and substandard conditions - causes: population growth, new migrants, competition of various urban land uses, high land price/ land rent, urban decay, demand for small dwelling units • Extensive and accurate use of geographical terminology	6
• Demonstrate adequate knowledge of the major causes of housing problems in Hong Kong • Accurate use of geographical terminology	3 – 5
• Demonstrate elementary knowledge of the major causes of housing problems in Hong Kong • Absence or inaccurate use of geographical terminology	1 – 2
Discuss whether developing the green belts is an effective way to solve the housing problems	
• Coherent and logical discussion of whether developing the green belts is an effective way to solve the housing problems - <u>Effective</u>: • increase in the supply of residential land use can be a fundamental solution to the insufficiency problem in housing • urban redevelopment can take place after residents in inner city areas moved to new residential area - <u>Ineffective</u>: • developing the green belts is controversial as it violates the existing development strategy of limiting urban expansion into the rural area • the change in land use may arouse disputes among different stakeholders in society, e.g. residents near the green belts, environmentalists • substandard housing conditions in the old urban areas may not be tackled • Extensive and accurate use of geographical terminology	6
• Appropriate discussion of whether developing the green belts is an effective way to solve the housing problems • Accurate use of geographical terminology	3 – 5
• Brief discussion of whether developing the green belts is an effective way to solve the housing problems • Absence or inaccurate use of geographical terminology	1 – 2
	Max. 12

Question 7

Explain how human activities increase the concentration of carbon dioxide in the atmosphere. Discuss whether the cooperation between the more developed countries and the less developed countries can help reduce carbon dioxide emissions.

Explanation	6
Discussion	6

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of discussion; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.
3. Award appropriate marks to **relevant and reasonable answers** not included in this marking scheme.

Generic Marking Guidelines	
Performance of Candidates	**Marks**
Explain how human activities increase the concentration of carbon dioxide in the atmosphere	
• Demonstrate comprehensive knowledge of how human activities increase the concentration of carbon dioxide in the atmosphere - increasing concentration of carbon dioxide due to increasing use of fossil fuels: • urban expansion, industrial development, use of vehicles and electrical appliances - decreasing absorption of carbon dioxide due to deforestation and burning of forests - incinerators • Extensive examples • Extensive and accurate use of geographical terminology	6
• Demonstrate adequate knowledge of how human activities increase the concentration of carbon dioxide in the atmosphere • Adequate examples • Accurate use of geographical terminology	3 – 5
• Demonstrate elementary knowledge of how human activities increase the concentration of carbon dioxide in the atmosphere • Few or no examples • Absence or inaccurate use of geographical terminology	1 – 2
Discuss whether the cooperation between the more developed countries and the less developed countries can help reduce carbon dioxide emissions	
• Coherent and logical discussion of whether the cooperation between the more developed countries and the less developed countries can help reduce carbon dioxide emissions - Ineffective: • cannot reduce carbon dioxide emissions • fail to cut down emissions for economic development • arguments among MDCs and LDCs - Effective: • can reduce carbon dioxide emissions • carbon trading • technological advancement and assistance • provision of capital to LDCs • Extensive and accurate use of geographical terminology	6
• Appropriate discussion of whether the cooperation between the more developed countries and the less developed countries can help reduce carbon dioxide emissions • Accurate use of geographical terminology	3 – 5
• Brief and general discussion of whether the cooperation between the more developed countries and the less developed countries can help reduce carbon dioxide emissions • Absence or inaccurate use of geographical terminology	1 – 2
	Max. 12

Paper 2
Section D

Question 1 **Marks**

(a) (i)
- granite 1
- area B 1 (2)

(ii)
- rising magma is trapped/ intrusion of magma 1
- **deep** below the earth's surface/ deep within the crust 1
- very slow rate of cooling 1
- solidification of magma 1
- a long crystallization process 1
- aggregation of minerals 1 (4)

(b) (i) gully/ badland 1 (1)

(ii) Characteristics of rock: (Max. 2)
- consists of quartz, feldspar and mica 1
- minerals interlocking in structure 1
- coarse-grained 1
- well-jointed/ pervious 1 (2)

How to favour landform X: (Max. 4; must be related to the characteristics of rocks above)
- feldspar and mica are less resistant to weathering 1
- rapid chemical weathering of rock 1
- e.g. oxidation/ hydration/ hydrolysis 1
- weathering agents (e.g. water) can penetrate along the joints into the rock mass 1
- producing deep weathered profile/ large amount of weathered materials for erosion 1
- weathered materials are easily eroded by running water 1
- to form rills 1 (4)

(iii) Marking criteria:

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of arguments; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.

- Candidates should refer to the following perspectives when discussing the effectiveness of tree-planting in slowing down the formation process of landform X: (Max. 5)
  - density of vegetation affects the rate of weathering and thus depth of the weathered profile
  - vegetation controls the rate of overland flow on slope, thus the rate of rill erosion and sheet erosion
  - effectiveness depends on density and types of vegetation
  - other measures to slow down gully erosion

- **2 marks** for discussing any perspective with **detailed description and explanation**
  - *Example: Tree-planting lowers the speed of overland flow, thus soil erosion is checked.*
- **1 mark** for discussing any perspective with **brief description or explanation only**
  - *Example: Tree-planting increases vegetation cover and soil erosion is checked.*
- **No marks** for merely comment of effective or ineffective without elaboration

Max. 18

Question 2

Marks

(a) (i) summer — 1 (1)

(ii)
- high pressure cells/ centres locate at oceans/ Pacific Ocean/ Atlantic Ocean — 1
- higher pressure/ high pressure belt at polar region/ high latitudes — 1
- low pressure cells/ centres locate at continent/ Asia — 1
- low pressure along equator/ low latitudes — 1
- lowest pressure in central Asia/ northern India/ SW part of USA — 1
- highest pressure at mid-latitudes — 1 (3)

(iii) Land and sea differences: (Max. 3)
- overhead sun at 23.5°N — 1
- lower heat capacity for land/ higher heat capacity for sea/ land absorbs heat at a faster rate than sea/ ocean — 1
- higher temperature on land than sea/ ocean — 1
- air heated up, expands and rises — 1
- air pressure is low at continent — 1

Air temperature: (Max. 3)
- angle of insolation/ the sun decreases with increasing latitude — 1
- insolation more concentrated at lower latitude — 1
- temperature is the lowest at the polar region — 1
- cold air is denser, thus air pressure is higher — 1

Atmospheric circulation: (Max. 3)
- convergence of trade winds at equator leads to uplifting of air and lower air pressure — 1
- descending air at 30°N/S leads to high air pressure — 1
- convergence of westerlies and polar winds at around 65°N leads to uplifting of air and lower pressure — 1 (5)

(iv)
- pressure gradient force drives air from high pressure to low pressure — 1
- air pressure at southeastern coast of China lower than Pacific Ocean — 1
- onshore wind blows from Pacific Ocean to southeastern coast of China — 1
- summer/ SE/ SW monsoon — 1
- reaching the low pressure centre in northern India/ China/ Asia — 1 (3)

(b) Description: (Max. 2)
- high temperature (33°C) — 1
- no rainfall (0 mm) — 1
- light wind (2.5 m/s)/ offshore wind (westerly wind) — 1
- low pressure (1 006 hPa) — 1 (2)

Explanation: (Max. 4; must be related to the description above)
- weather system X is a tropical cyclone/ typhoon — 1
- rising air at the centre/ lowest air pressure at the eye of tropical cyclone/ typhoon — 1
- air moves to the centre of tropical cyclone/ typhoon in anticlockwise direction — 1
- pressure gradient force leads to offshore wind — 1
- gentle pressure gradient leads to light wind — 1
- offshore wind contains little moisture — 1
- air descends along coastal China — 1
- sinking air suppresses cloud formation/ clear sky — 1
- allows more insolation reaching ground surface/ high temperature resulted — 1 (4)

Max. 18

Question 3 **Marks**

(a) (i)
- time-efficient/ fast 1
- reaches a large market within a short period of time 1
- suitable for high value-added goods 1
- efficient for long distance transport 1
- limited number of passengers within flight time 1
- expensive in terms of weight and distance 1
- high terminal cost 1 (3)

(ii)
- air flight can reach 40% of the world's population within five hours 1
- a huge market/ hinterland for cargo traffic 1
- facilitates export of goods and entrepôt trade 1
- connectivity enhances the trade of Hong Kong 1
- attracts tourists from a large market 1
- ancillary services developed to serve the business trips 1
- passenger transport helps establish Hong Kong as an international business centre 1
- efficient cargo and passenger management systems 1 (5)

(b) (i) Description:
- increasing passenger traffic and cargo traffic 1
- rate of increase in cargo traffic higher than that of passenger traffic 1 (1)

Explanation:
- improvement in living standard leads to higher demand on passenger transport 1
- cargo transport increases with economic growth of the Mainland 1 (1)

(ii)
- competition from the neighbouring airports 1
- higher rate of economic growth in the Mainland supports greater demand in cargo and passenger transport 1
- overlapping of hinterland with Guangzhou and Shenzhen airports 1
- air routes are controlled/ limited due to overlapping of air space with the Mainland 1
- saturation of **handling capacity** of the HKIA 1 (3)

(iii) Marking criteria:

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of arguments; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.

- Candidates should refer to the following perspectives when discussing the reasons for and against improving air traffic management to meet the rising demand for air transport: (Max. 5)
  - Reasons for: (Max. 4 marks)
    - increasing the handling capacity of the airport
    - reducing the costs of operation/ cost-effective
    - no need to bear the costs of construction of the third runway
  - Reasons against: (Max. 4 marks)
    - cannot solve the problem of over-capacity in the long run
    - affecting safety of air flight for landing and taking off
    - restricted by the minimum time and distance between two planes on the runway within the safety zone
- **2 marks** for discussing any perspective with **detailed description and explanation**
  - *Example: Improving air traffic management maximises aircraft movement, thus increasing the handling capacity of the airport.*
- **1 mark** for discussing any perspective with **brief description or explanation only**
  - *Example: Improving air traffic management increases the handling capacity of the airport.*

Max. 18

Question 4 **Marks**

(a) (i)
- growth of gross industrial output increased nearly 10 times 1
- decreasing percentage of labour-intensive industry 1
- increasing percentage of technology-intensive industry 1
- increasing percentage of capital-intensive industry 1
- increasing foreign direct investment in industry 1 (3)

(ii) Description: (Max. 2)
- shortage of skilful labour 1
- keen competition of land use 1
- increasing costs of production 1
- increasing investment on pollution control technology 1
- insufficient infrastructure/ ancillary services, e.g. power and transport networks 1 (2)

Explanation: (Max. 3; must be related to the description above)
- competition for skilful labour due to rapid development of technology-intensive industries in the 2010s 1
- increasing demand for land from other land uses 1
- tightening of environmental protection ordinance 1
- rates of provision of power supply and construction of transport networks do not match with economic expansion 1
- raising wages due to implementation of minimum wage rates 1 (3)

(b) (i)
- carrying out more R & D on innovative products (R & D in GDP increased from 1.8% to 4.0%) 1
- population receiving tertiary education increased from 28% to 36% 1
- improvement of production and management skills as more people have received tertiary education 1
- shifting to produce high-value added products (value-addedness increased from 20.6% to 26.0%) 1
- production of high-tech products 1
- adoption of mechanisation/ automation of production to reduce labour cost 1
- adoption of green production technology (17% reduction in carbon dioxide emissions) 1 (5)

(ii) Marking criteria:

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of arguments; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.

- Candidates should refer to the following perspectives when commenting the significance of the policy on the changing industrial pattern: (Max. 5)
  - Government policies causing changing industrial patterns: R & D/ infrastructure or public utilities development/ relocation of polluting industries by setting emission reduction target/ setting up science parks & high-tech industrial parks
  - Other factors: increased foreign investment/ strong competition with foreign markets/ expansion of overseas markets

- **2 marks** for a comment with **detailed description and explanation**
  - *Example: The policy is significant as with more investment in R & D, different kinds of high-tech industries have grown in the last decade.*

- **1 mark** for a comment with **brief description or explanation only**
  - *Example: The policy is significant as more high-tech industries have developed.*

Max. 18

Section E

Question 5

In terms of rock cycle, explain how sedimentary rocks changed into metamorphic rocks. Discuss the significance of the nature of sedimentary rocks in shaping the physical landscape of Hong Kong.

Explanation	6
Discussion	6

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of discussion; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.
3. Award appropriate marks to **relevant and reasonable answers** not included in this marking scheme.

Generic Marking Guidelines	
Performance of Candidates	**Marks**
Explain how sedimentary rocks changed into metamorphic rocks in terms of rock cycle	
• Comprehensive knowledge of how sedimentary rocks changed into metamorphic rocks in terms of rock cycle - accurate description of the rock cycle - accurate explanation of the change of sedimentary rocks into metamorphic rocks in the rock cycle • Appropriate use of examples • Extensive and accurate use of geographical terminology	6
• Adequate knowledge of how sedimentary rocks changed into metamorphic rocks in terms of rock cycle • Accurate use of geographical terminology	3 – 5
• Elementary knowledge of how sedimentary rocks changed into metamorphic rocks in terms of rock cycle • Absence or inaccurate use of geographical terminology	1 – 2
Discuss the significance of the nature of sedimentary rocks in shaping the physical landscape of Hong Kong	
• Coherent and logical discussion • Clear description of the nature of sedimentary rocks in shaping the physical landscape of Hong Kong - different nature of sedimentary rocks in terms of chemical composition and mode of formation - resulting in different resistance to weathering and erosion, especially in the northeastern part of the New Territories - e.g. clearly bedded/ layered rocks, depth of weathered profile, steepness of slopes, colourful landforms, height of the hills, distinctive landforms, e.g. waterfall, wave-cut platforms, arches, ridges • Extensive and accurate use of geographical terminology	6
• Appropriate discussion of the nature of sedimentary rocks in shaping the physical landscape of Hong Kong • Accurate use of geographical terminology	3 – 5
• Brief or limited discussion of the nature of sedimentary rocks in shaping the physical landscape of Hong Kong • Absence or inaccurate use of geographical terminology	1 – 2
	Max. 12

Question 6

Discuss the impact of drought on agriculture and industries in North China. Evaluate the effectiveness of water resource management in reducing the impact.

Discussion	6
Evaluation	6

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of discussion; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.
3. Award appropriate marks to **relevant and reasonable answers** not included in this marking scheme.

Generic Marking Guidelines	
Performance of Candidates	**Marks**
Discuss the impact of drought on agriculture and industries in North China	
• Coherent and logical discussion • Clear description of the importance of water to agricultural and industrial activities in North China, e.g. water for irrigation in farming, as raw materials, for cooling, for cleaning, etc. in industries • Logical explanations of the impact of drought on agriculture and industries in North China - reduction in HEP generation - reduction in water supply for agricultural and industrial inputs and processes - shortening of growing season - reduction in productivity/ crop failure - reduction in quality of farm produce and industrial products • Extensive and accurate use of geographical terminology	6
• Appropriate description of the importance of water to agricultural and industrial activities in North China • Appropriate explanations of the impact of drought on agriculture and industries in North China • Accurate use of geographical terminology	3 – 5
• Brief or limited discussion on the impact of drought on agriculture and industries in North China • Inadequate knowledge of the impact of drought • Absence or inaccurate use of geographical terminology	1 – 2
Evaluate the effectiveness of water resource management in reducing the impact	
• Coherent, logical and in-depth evaluation of the effectiveness of water resource management in reducing the impact • Clearly stating the measures of water resource management • Effectiveness depends on: - effective enforcement of policy - awareness of local people/ industrialists - economic incentives - cooperation between local governments - other measures, e.g. afforestation, relocation of water-polluting industries • Extensive and accurate use of geographical terminology	6
• Briefly stating the measures of water resource management • General evaluation of the effectiveness of water resource management in reducing the impact • Accurate use of geographical terminology	3 – 5
• Superficial evaluation of the effectiveness of water resource management in reducing the impact • Absence or inaccurate use of geographical terminology	1 – 2
	Max. 12

Question 7

Explain how the distribution of urban land use induces transport problems in Hong Kong. Evaluate the effectiveness of electronic road pricing in alleviating the transport problems.

Explanation	6
Evaluation	6

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of discussion; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.
3. Award appropriate marks to **relevant and reasonable answers** not included in this marking scheme.

Generic Marking Guidelines Performance of Candidates	Marks
Explain how the distribution of urban land use induces transport problems in Hong Kong	
• Demonstrate comprehensive knowledge of the distribution of urban land use in Hong Kong • Accurate explanation of the relationship between the distribution of urban land use in Hong Kong and the transport problems - residential areas mainly concentrated outside the CBD and in new towns - large amount of urban commuters taking daily work trips via different road systems and public transport systems - local CBD remains as centre of attraction for commercial activities - besides flow of people, cargo transport entering the industrial areas also creates traffic congestion - rises in the flow of people and logistics intensify the transport problems, e.g. air pollution, traffic accidents, congestion of mass transit system, parking problem • Extensive and accurate use of geographical terminology related to urban land use, transport and urban commuting theories	6
• Demonstrate adequate knowledge of the distribution of urban land use in Hong Kong • Appropriate explanation of the relationship between the current distribution of urban land use in Hong Kong and the transport problems • Accurate use of geographical terminology	3 – 5
• Brief explanation of how the distribution of urban land use in Hong Kong causes transport problems • Demonstrate insufficient knowledge of the distribution of urban land use in Hong Kong • Insufficient understanding of the relationship between the distribution of urban land use in Hong Kong and the transport problems • Absence or inaccurate use of geographical terminology	1 – 2
Evaluate the effectiveness of electronic road pricing in alleviating the transport problems	
• Coherent and logical evaluation of the effectiveness of electronic road pricing (ERP) in alleviating the transport problems - clear explanation of the rationales of ERP in solving transport problems - under the 'user pays' principle, ERP may alleviate transport problems, such as traffic congestion, air and noise pollution, socio-economic costs resulted from transport problems - supporting and substituting facilities should be available for roads users, e.g. shuttle bus service to reduce the number of private cars entering the areas adopting the system - effectiveness depends on the capacity of alternate roads to handle the increasing traffic channelled from the main road • Extensive and accurate use of geographical terminology	6
• Appropriate evaluation of the effectiveness of electronic road pricing (ERP) in alleviating the transport problems • Appropriate description of the detail of ERP • Accurate use of geographical terminology	3 – 5
• Brief and limited evaluation of the effectiveness of electronic road pricing (ERP) in alleviating the transport problems • Lack of understanding of ERP • Absence or inaccurate use of geographical terminology	1 – 2
	Max. 12

Question 8

Discuss the impact of land use conflict and labour shortage on the agricultural production of the Zhujiang Delta Region in the last decade. Evaluate the effectiveness of the adoption of modern farming technology in reducing the impact.

Discussion	6
Evaluation	6

Notes:

1. Award appropriate marks according to the **QUALITY** and **DEPTH** of discussion; **do not** count the number of points **only**.
2. Max. marks should be given to good quality answers with **well-elaborated arguments** and demonstrating good knowledge on relevant geographical concepts.
3. Award appropriate marks to **relevant and reasonable answers** not included in this marking scheme.

Generic Marking Guidelines	
Performance of Candidates	**Marks**
Discuss the impact of land use conflict and labour shortage on the agricultural production of the Zhujiang Delta Region in the last decade	
• Demonstrate comprehensive knowledge and logical explanation of the impact on agricultural production of the Zhujiang Delta Region from its competition of land use and labour with other economic activities: - changes in types of crops - farms at hilly areas/ marginal land - changes in types and intensity of production - reduction in farm size - mechanisation of production • Extensive and accurate use of geographical terminology	6
• Demonstrate adequate knowledge of the impact of land use conflict and labour shortage on the agricultural production of the Zhujiang Delta Region in the last decade • Accurate use of geographical terminology	3 – 5
• Demonstrate elementary knowledge of the impact of land use conflict and labour shortage on the agricultural production of the Zhujiang Delta Region in the last decade • Absence or inaccurate use of geographical terminology	1 – 2
Evaluate the effectiveness of the adoption of modern farming technology in reducing the impact	
• Coherent and logical evaluation of the effectiveness of the adoption of modern farming technology in reducing the impact • Methods may include farm mechanisation, greenhouse farming, factory farming, hydroponics, use of genetically modified or high-yielding seeds • Effective in terms of : - depending less on physical environment - compensating the loss of farmland - replacing the loss of farm labour force - minimising the impact of pollution - raising farm productivity • Effectiveness depends on: - affordability of large capital input - acquisition of specific skills and knowledge - government supports, e.g. R & D - relief • Extensive and accurate use of geographical terminology	6
• Appropriate evaluation of the effectiveness of the adoption of modern farming technology in reducing the impact • Accurate use of geographical terminology	3 – 5
• Brief and general evaluation of the effectiveness of the adoption of modern farming technology in reducing the impact • Absence or inaccurate use of geographical terminology	1 – 2
	Max. 12