

**PRACTICE PAPER**  
**GEOGRAPHY PAPER 1**

(2½ hours)

This paper must be answered in English

**GENERAL INSTRUCTIONS**

- This paper consists of **THREE** sections:
  - Section A** – consists of 40 multiple-choice questions. Answer **ALL** questions in this section.
  - Section B** – consists of 4 data / skill-based structured questions. Choose **TWO** questions only in this section.
  - Section C** – consists of 3 short essay questions. Choose **ONE** question only in this section.
- Draw sketch maps and diagrams to supply additional, relevant information when appropriate.
- A map extract is provided in this paper.
- Answers to Section A should be marked on the Multiple-choice Answer Sheet. Answers to Sections B and C should be written in the Answer Book. In the Answer Book, start each question (not part of a question) on a new page. **The Answer Sheet for Section A and the Answer Book for Sections B and C must be handed in separately at the end of the examination.**

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**INSTRUCTIONS FOR SECTION A (MULTIPLE-CHOICE QUESTIONS)**

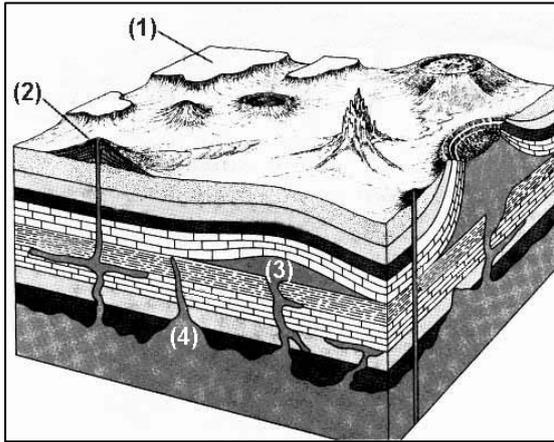
- Read carefully the instructions on the Answer Sheet. After the announcement of the start of the examination, you should first stick a barcode label and insert the information required in the spaces provided. No extra time will be given for sticking on the barcode label after the ‘Time is up’ announcement.
- When told to open this book, you should check that all the questions are there. Look for the words ‘**END OF SECTION A**’ after the last question.
- All questions carry equal marks.
- ANSWER ALL QUESTIONS.** You are advised to use an HB pencil to mark all the answers on the Answer Sheet, so that wrong marks can be completely erased with a clean rubber. You must mark the answers clearly; otherwise you will lose marks if the answers cannot be captured.
- You should mark only **ONE** answer for each question. If you mark more than one answer, you will receive **NO MARKS** for that question.
- No marks will be deducted for wrong answers.

**Section A: There are 40 questions in this section. Answer ALL questions in this section. All the answers must be marked on the Answer Sheet.**

Questions 1 to 5 refer to the map extract of Hong Kong (1:20 000) provided.

1. In which of the following grid squares is a trellis drainage pattern?
  - A. 0074
  - B. 0179
  - C. 0277
  - D. 9877
  
2. The area of Tsing Yi Island is approximately
  - A. 9 km<sup>2</sup>.
  - B. 12 km<sup>2</sup>.
  - C. 15 km<sup>2</sup>.
  - D. 18 km<sup>2</sup>.
  
3. The average gradient of the section of river from grid reference 997776 to the catchwater is
  - A. 1:2.1.
  - B. 1:2.4.
  - C. 1:2.7.
  - D. 1:3.0.
  
4. Which of the following are the locational advantages of the farmland at Tin Fu Tsai (grid square 9779)?
  - (1) located in the lowland
  - (2) flat relief
  - (3) direct access to the main road
  - (4) source of water for irrigation
  - A. (1) and (3) only
  - B. (2) and (4) only
  - C. (1), (2) and (3) only
  - D. (2), (3) and (4) only
  
5. Along grid references 000770 to 020770, we can find
  - (1) institutional land use.
  - (2) recreational land use.
  - (3) transport land use.
  - (4) residential land use.
  - A. (1) and (4) only
  - B. (1), (2) and (3) only
  - C. (2), (3) and (4) only
  - D. (1), (2), (3) and (4)

6.

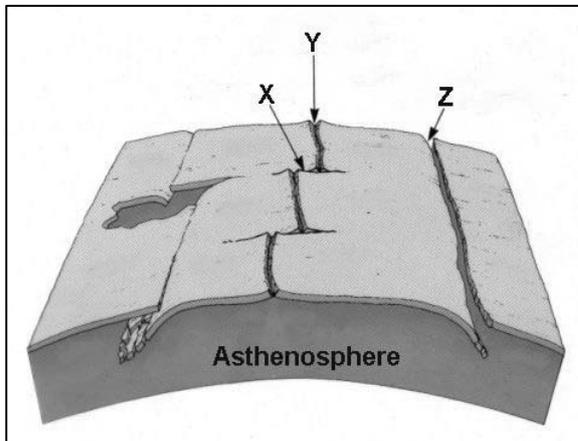


Which of the following CORRECTLY describe the formation of the landform features shown in the above diagram?

Landform feature	Formation
(1)	extrusive vulcanicity
(2)	folding
(3)	very slow cooling of magma
(4)	violent volcanic eruption

- A. (1) and (3) only
- B. (2) and (4) only
- C. (1), (2) and (4) only
- D. (1), (2), (3) and (4)

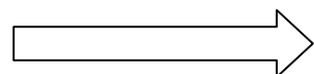
7.



Which of the following descriptions about X, Y and Z are CORRECT?

	X	Y	Z
(1) <i>Feature</i>	transform fault	mid-oceanic ridge	ocean trench
(2) <i>Type of force</i>	shear force	tensional force	compressional force
(3) <i>Convection in mantle</i>	convergence	divergence	convergence
(4) <i>Tectonic movement</i>	lateral displacement	seafloor spreading	plate subduction

- A. (1) and (2) only
- B. (3) and (4) only
- C. (1), (2) and (4) only
- D. (1), (2), (3) and (4)



8. The table below shows the information of two earthquakes occurred at city X.

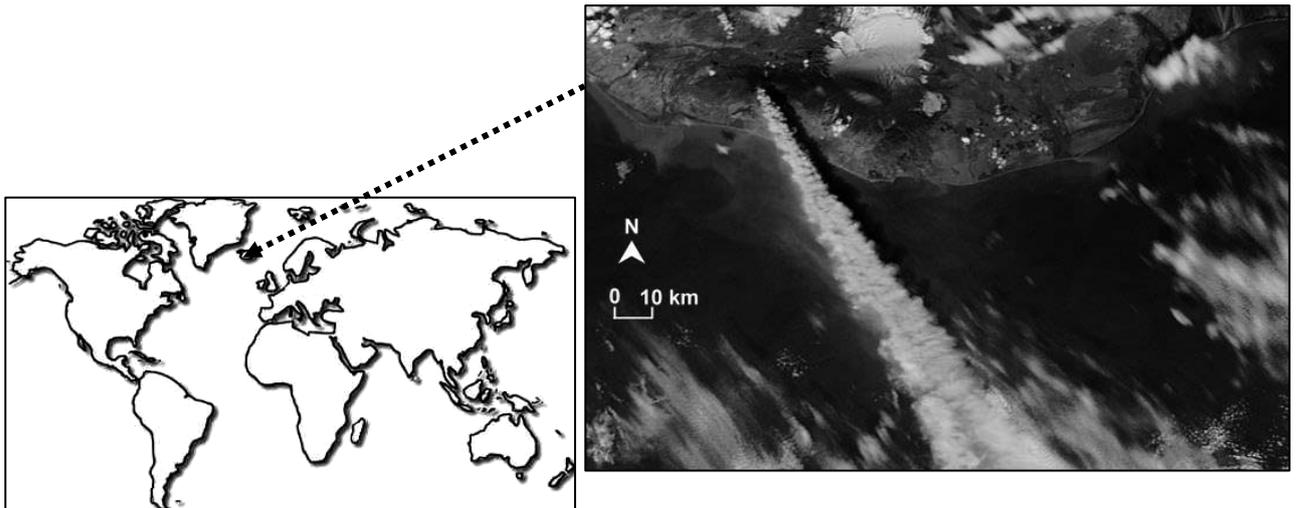
Distance from epicentre	Date/ Local time	Magnitude (Richter Scale)	Casualties
40 km	4 September 2010 (Saturday) 4:35 a.m.	7.1	<ul style="list-style-type: none"> <li>approximately 100 injured, 2 serious</li> </ul>
10 km	22 February 2011 (Tuesday) 12:51 p.m.	6.3	<ul style="list-style-type: none"> <li>181 deaths</li> <li>1 500 – 2 000 injuries, 104 serious</li> </ul>

Which of the following statements CORRECTLY explain the higher casualties in the 2011 earthquake?

- (1) The epicentre was closer to the city.
- (2) The local residents were less aware of the potential danger.
- (3) The structure of many buildings was already weakened in the previous earthquake.
- (4) The earthquake occurred during lunchtime on a weekday.

- A. (1) and (3) only
- B. (2) and (4) only
- C. (1), (2) and (3) only
- D. (2), (3) and (4) only

9.



Which of the following statements about the natural hazard in the above photograph are CORRECT?

- (1) Tectonic activities are active.
- (2) The hazard was caused by the divergence of plates.
- (3) The hazard will disrupt air transport.
- (4) Volcanic ash will block the sunlight.

- A. (1) and (3) only
- B. (2) and (4) only
- C. (1), (3) and (4) only
- D. (1), (2), (3) and (4)

10.



Which of the following measures DOES NOT help to reduce the loss caused by the natural hazard shown in the above photograph?

- A. insurance
- B. drilling
- C. warning system
- D. land use zoning

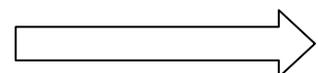
11. Which of the following are CORRECT comparisons between the upper course and the lower course of rivers?

	Upper course	Lower course
(1) <i>Gradient</i>	large	small
(2) <i>Mean velocity of flow</i>	high	low
(3) <i>Roundness of load</i>	high	low
(4) <i>Roughness of river bed</i>	high	low

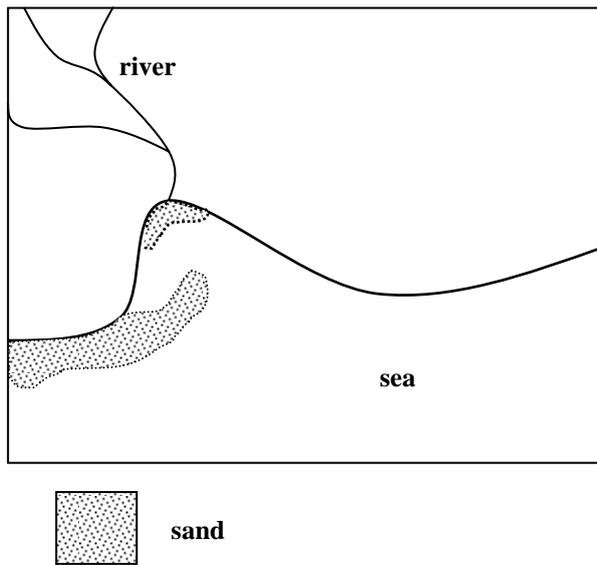
- A. (1) and (4) only
- B. (2) and (3) only
- C. (1), (2) and (3) only
- D. (1), (2) and (4) only

12. Which of the following favours the development of deltas?

- A. building of dams
- B. returning farmland to lakes
- C. deforestation at the upper course
- D. cutting down of mangroves at the river mouth



Refer to the diagram below to answer Questions 13 and 14.



13. What depositional landforms are shown in the diagram?

- (1) beach
- (2) sand spit
- (3) sand bar
- (4) tombolo

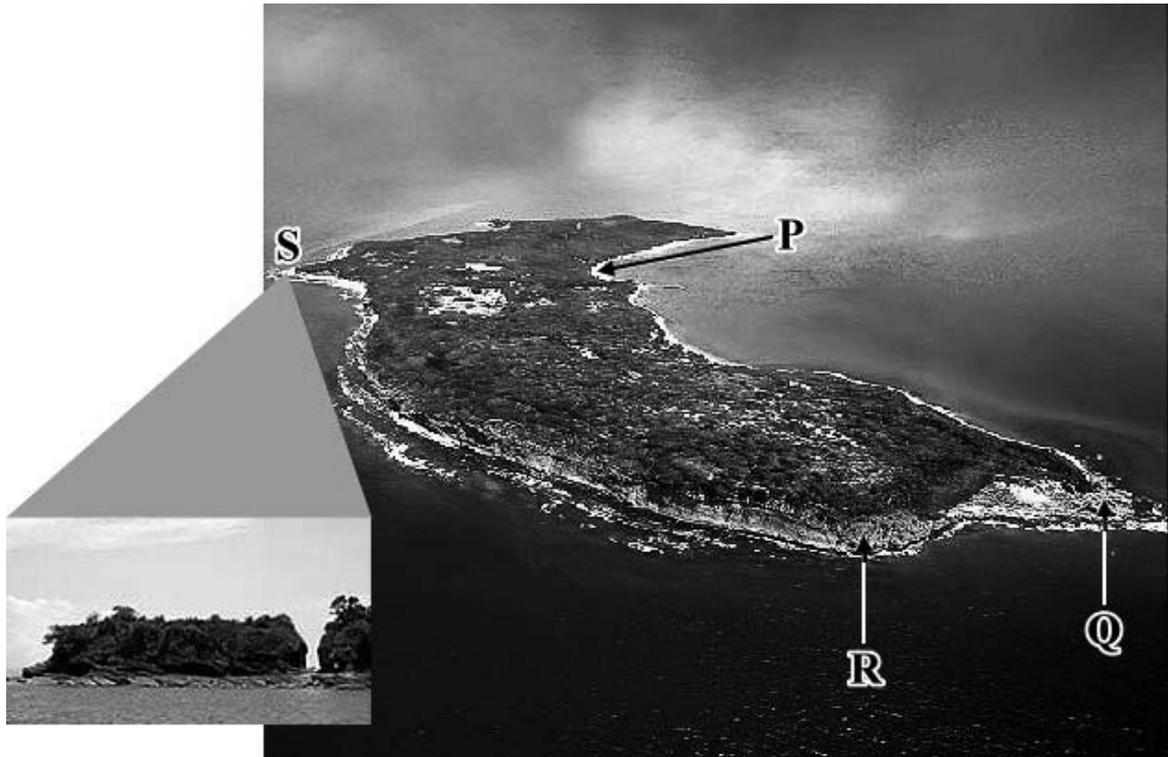
- A. (1) and (2) only
- B. (1) and (4) only
- C. (2) and (3) only
- D. (3) and (4) only

14. Which of the following are favourable physical conditions for the formation of the above depositional landforms?

- (1) long fetch
- (2) existence of longshore drift
- (3) alluvium brought by the river
- (4) swash greater than backwash

- A. (1) and (2) only
- B. (3) and (4) only
- C. (1), (2) and (4) only
- D. (2), (3) and (4) only

15.



Refer to the above photograph of an island in the northeast New Territories. Which of the following descriptions are CORRECT?

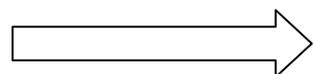
	Landform	Major coastal process
(1)	P	depositional
(2)	Q	depositional
(3)	R	erosional
(4)	S	erosional

- A. (1) and (2) only
- B. (1), (3) and (4) only
- C. (2), (3) and (4) only
- D. (1), (2), (3) and (4)

16. Why do transnational corporations set up their production plants in less developed countries?

- (1) to open up new market
- (2) to avoid trade barriers
- (3) to gain access to market information
- (4) to reduce production costs

- A. (1) and (2) only
- B. (1), (3) and (4) only
- C. (2), (3) and (4) only
- D. (1), (2), (3) and (4)



17. What were the reasons for the concentration of iron and steel industries in Northeast China before 1949?

- (1) an abundant labour supply
- (2) rich reserves in iron ore and coal
- (3) a well-developed transport system
- (4) a long history of industrial development

- A. (1) and (2) only
- B. (1), (3) and (4) only
- C. (2), (3) and (4) only
- D. (1), (2), (3) and (4)

18. What are some possible factors for the high concentration of IT firms in Silicon Valley, California?

- (1) low wages
- (2) abundant raw materials
- (3) close to research institutes
- (4) with agglomeration economies

- A. (1) and (2) only
- B. (3) and (4) only
- C. (1), (3) and (4) only
- D. (1), (2), (3) and (4)

19.



The above photograph shows a factory in the suburb. Which of the following are explanations of this location?

- (1) low land rent
- (2) pleasant environment
- (3) well-connected transport system
- (4) low population density

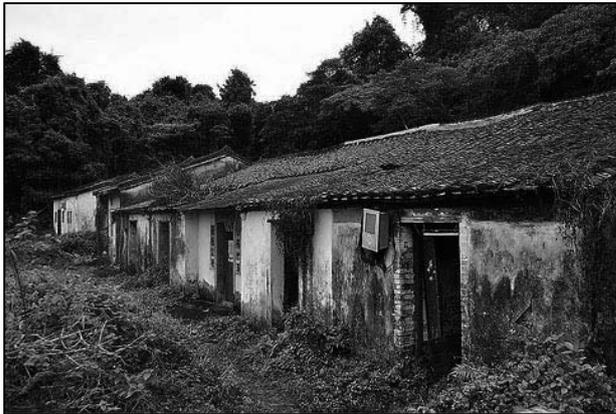
- A. (1) and (2) only
- B. (3) and (4) only
- C. (1), (2) and (3) only
- D. (1), (2), (3) and (4)

20. Which of the following pairs of comparisons are CORRECT?

	<b>Iron and steel industry</b>	<b>IT industry</b>
(1) <i>Labour</i>	unskilled	skilled
(2) <i>Product</i>	heavy	light
(3) <i>Power consumption</i>	lower	higher
(4) <i>Land requirement</i>	larger	smaller

- A. (1) and (3) only
- B. (2) and (4) only
- C. (1), (2) and (4) only
- D. (1), (3) and (4) only

21.



Which of the following are the causes of the problem shown in the above photograph?

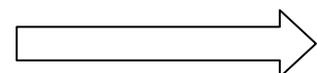
- (1) shortage of land
- (2) out-migration of people
- (3) lack of employment opportunities
- (4) remote location

- A. (1) and (2) only
- B. (3) and (4) only
- C. (2), (3) and (4) only
- D. (1), (2), (3) and (4)

22. Which of the following are the advantages of using reclamation as a means to solve the problem of land shortage in Hong Kong?

- (1) land acquisition is not necessary
- (2) more land is available for future development
- (3) favourable for the expansion of port-related activities
- (4) no pollution is created

- A. (1) and (4) only
- B. (2) and (3) only
- C. (1), (2) and (3) only
- D. (1), (2), (3) and (4)

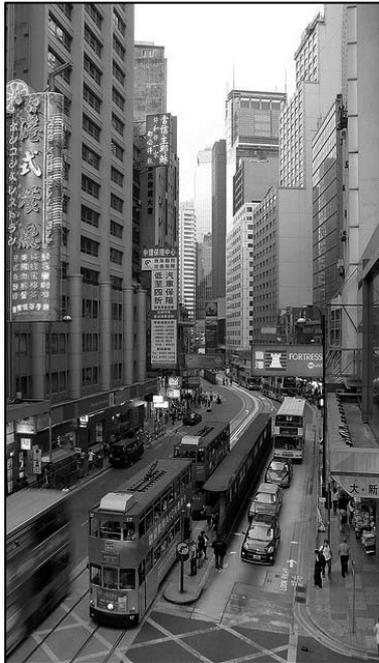


23. Why do many buildings in the inner city areas lack proper maintenance?

- (1) The tenants lack money.
- (2) The owners are not willing to invest money on maintenance.
- (3) The tenants are not aware of the poor conditions of the buildings.
- (4) It is the government's responsibility to carry out the maintenance work.

- A. (1) and (2) only
- B. (3) and (4) only
- C. (1), (2) and (4) only
- D. (1), (2), (3) and (4)

24.



Which of the following may affect the air pollution index of the area in the above photograph?

- (1) exhaust from transport means
- (2) high buildings block the dispersal of pollutants
- (3) carbon monoxide from air-conditioning systems of buildings
- (4) suspended particles from factories in the area

- A. (1) and (2) only
- B. (3) and (4) only
- C. (1), (2) and (4) only
- D. (1), (2), (3) and (4)

25.

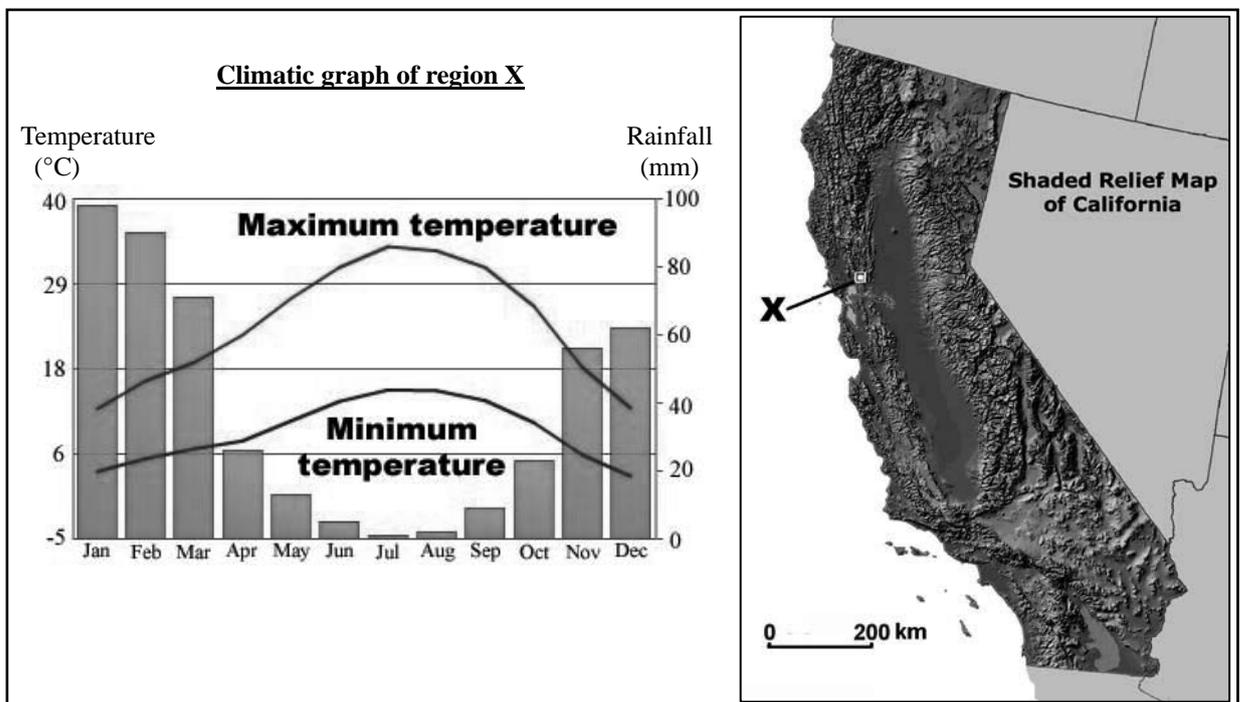
	1991	2001	2011
<b>Urban population (million)</b>	22	25	36
<b>Total population (million)</b>	84	100	118

The above table shows the population changes of country A from 1991 to 2011. Which of the following CORRECTLY describe the population changes in country A?

- (1) continuous decrease in rural population
- (2) continuous increase in urban population
- (3) continuous drop in the population growth rate
- (4) continuous rise in the level of urbanisation

- A. (1) and (4) only
- B. (2) and (3) only
- C. (1), (2) and (3) only
- D. (1), (2) and (4) only

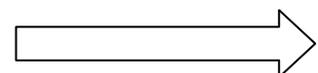
26.



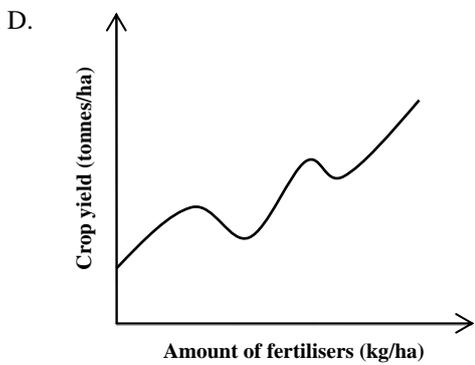
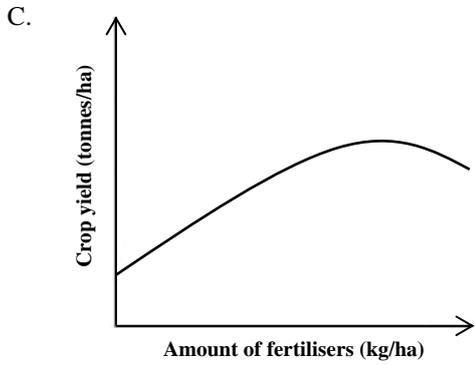
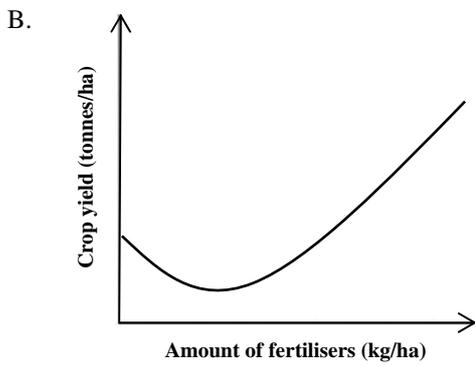
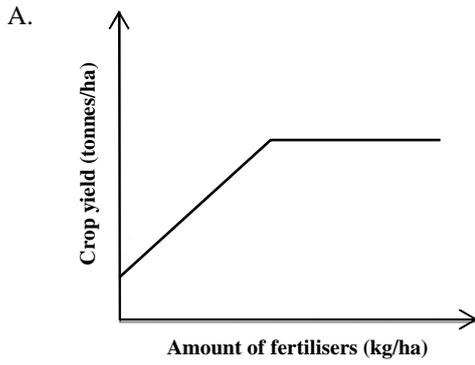
The above diagram shows the climate and relief of region X in California. Which of the following are the CORRECT descriptions of the problems faced by the farmers in region X?

- (1) short frost-free days
- (2) high risk of drought
- (3) lack of extensive lowland
- (4) large annual range of temperature

- A. (1) and (4) only
- B. (2) and (3) only
- C. (2), (3) and (4) only
- D. (1), (2), (3) and (4)



27. Which of the following graphs shows the CORRECT relationship between the application of fertilisers and crop yield?



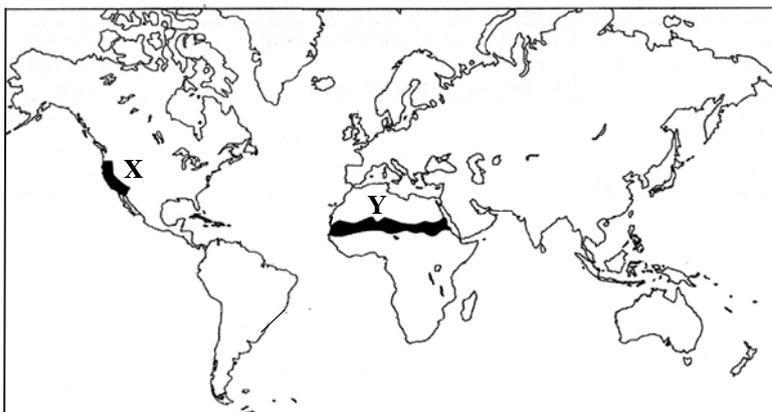
28.



Which of the following CORRECTLY matches the physical constraints of the farming activity shown in the above photograph and the solution adopted by local farmers?

	Physical constraints	Solutions
A.	dust storm	plant windbreaks
B.	drought	install drip irrigation
C.	drying up of waterhole	tap underground water
D.	low carrying capacity	practise transhumance

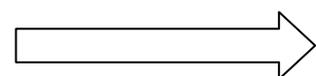
29.



Which of the following are CORRECT comparisons between farming in regions X and Y in the above map?

	X	Y	
(1)	<i>Farming type</i>	mainly arable	mainly pastoral
(2)	<i>Climate</i>	warm and wet	hot and dry
(3)	<i>Market</i>	local and overseas	local
(4)	<i>Technological input</i>	lower	higher

- A. (1) and (3) only
- B. (2) and (4) only
- C. (1), (3) and (4) only
- D. (1), (2), (3) and (4)



30. Which of the following may increase the risk of famine in less developed countries?

- (1) climatic anomalies
- (2) lack of farm labour
- (3) more farmlands for biofuels
- (4) land degradation

- A. (1) and (2) only
- B. (1), (3) and (4) only
- C. (2), (3) and (4) only
- D. (1), (2), (3) and (4)

31. Which of the following are CORRECT descriptions of the trees in the emergent layer of tropical rainforests?

	<b>Part</b>	<b>Characteristic</b>	<b>Adaptation</b>
(1)	trunk	tall	strive for sunlight
(2)	canopy	lateral development	absorb more sunlight
(3)	roots	shallow	absorb nutrients from top soil
(4)	leaves	small	drain away excessive water

- A. (1) and (2) only
- B. (1), (2) and (3) only
- C. (1), (3) and (4) only
- D. (2), (3) and (4) only

32. Transnational corporations can reduce damage to the tropical rainforests by

- (1) using recycled paper.
- (2) refusing to use timber from primary forests.
- (3) cooperating with the governments of less developed countries to set up national parks.
- (4) subsidising environmental organisations to conserve the rainforests.

- A. (1) and (2) only
- B. (3) and (4) only
- C. (1), (2) and (4) only
- D. (1), (2), (3) and (4)

33. Which of the following are favourable growing conditions for vegetation in tropical rainforests?

- (1) small diurnal range of temperature
- (2) high amount of annual rainfall
- (3) fertile soil
- (4) abundant sunshine

- A. (1) and (4) only
- B. (2) and (3) only
- C. (1), (2) and (4) only
- D. (2), (3) and (4) only

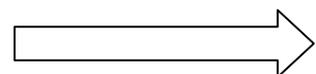
34. Which of the following is NOT a likely impact of exploiting the tropical rainforest on the native people?
- A. a reduction in rainforest resources
  - B. a decrease in employment opportunities
  - C. loss of traditional culture
  - D. an improvement in external transport

35.



The above photograph shows a canopy walk in the tropical rainforest. What effect will this activity have on the tropical rainforest regions?

- (1) increasing the economic benefits
  - (2) raising awareness of rainforest conservation
  - (3) creating disturbance to the living organisms at the canopy
  - (4) reducing biodiversity
- A. (1) and (2) only
  - B. (3) and (4) only
  - C. (1), (2) and (3) only
  - D. (1), (2), (3) and (4)
36. What impact will global warming have on the coastal ecosystem?
- (1) coral bleaching
  - (2) increasing damage by storms
  - (3) increasing pH value of seawater
  - (4) retreating of coastline
- A. (1) and (4) only
  - B. (2) and (3) only
  - C. (1), (2) and (4) only
  - D. (1), (2), (3) and (4)

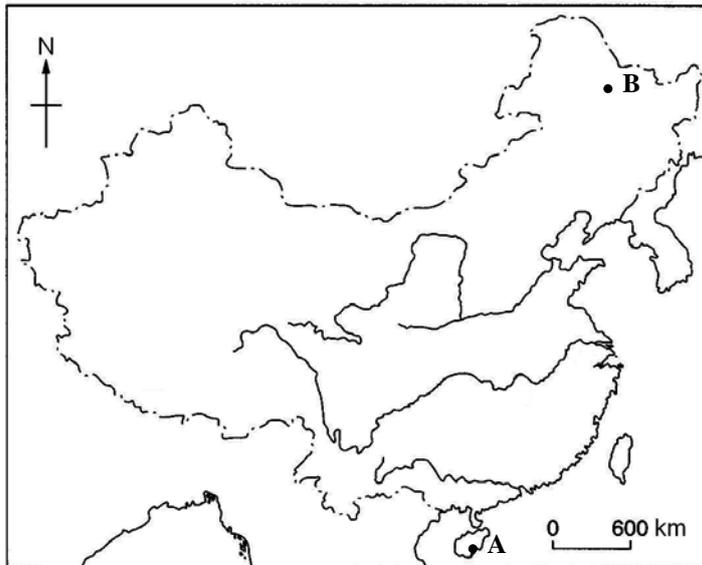


Refer to the diagram below to answer Questions 37 and 38.



37. Which of the following will NOT be an impact of global warming on area X?
- A. more pests
  - B. more typhoons
  - C. more fresh water resources
  - D. longer growing seasons of crops
38. Which of the following is NOT a reason for area Y to be prone to the impact of climatic changes?
- A. coastal location
  - B. high population density
  - C. low economic level
  - D. large amount of greenhouse gases emission
39. Which of the following are greenhouse gases?
- (1) methane
  - (2) carbon monoxide
  - (3) carbon dioxide
  - (4) nitrous oxide
- A. (1) and (3) only
  - B. (2) and (4) only
  - C. (1), (2) and (4) only
  - D. (1), (3) and (4) only

40.

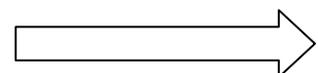


The above map shows the locations of cities A and B. Which of the following comparisons CORRECTLY describe the insolation characteristics of city A and city B in July?

	City A	City B
(1) <i>Amount of insolation</i>	more	less
(2) <i>Angle of insolation</i>	larger	smaller
(3) <i>Extent of sunshine</i>	larger	smaller
(4) <i>Duration of sunshine</i>	longer	shorter

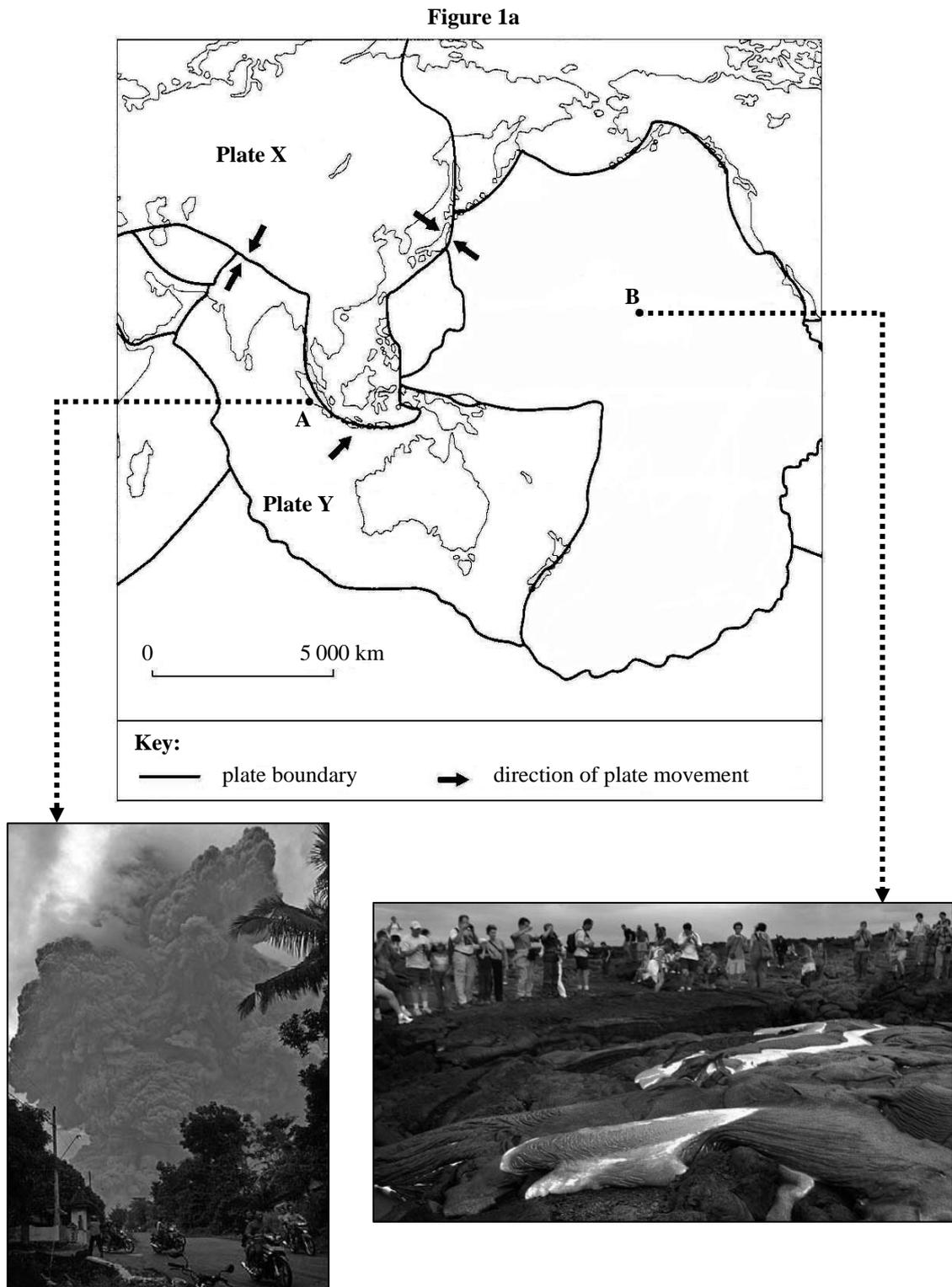
- A. (1) and (2) only
- B. (3) and (4) only
- C. (2), (3) and (4) only
- D. (1), (2), (3) and (4)

**END OF SECTION A**



**Section B: Answer any TWO questions from this section. Each question carries 18 marks.**

1. Figure 1a shows the locations of regions A and B where a tectonic hazard occurs frequently. Figure 1b shows some information about the tectonic hazard at region B.



(a) Refer to Figure 1a.

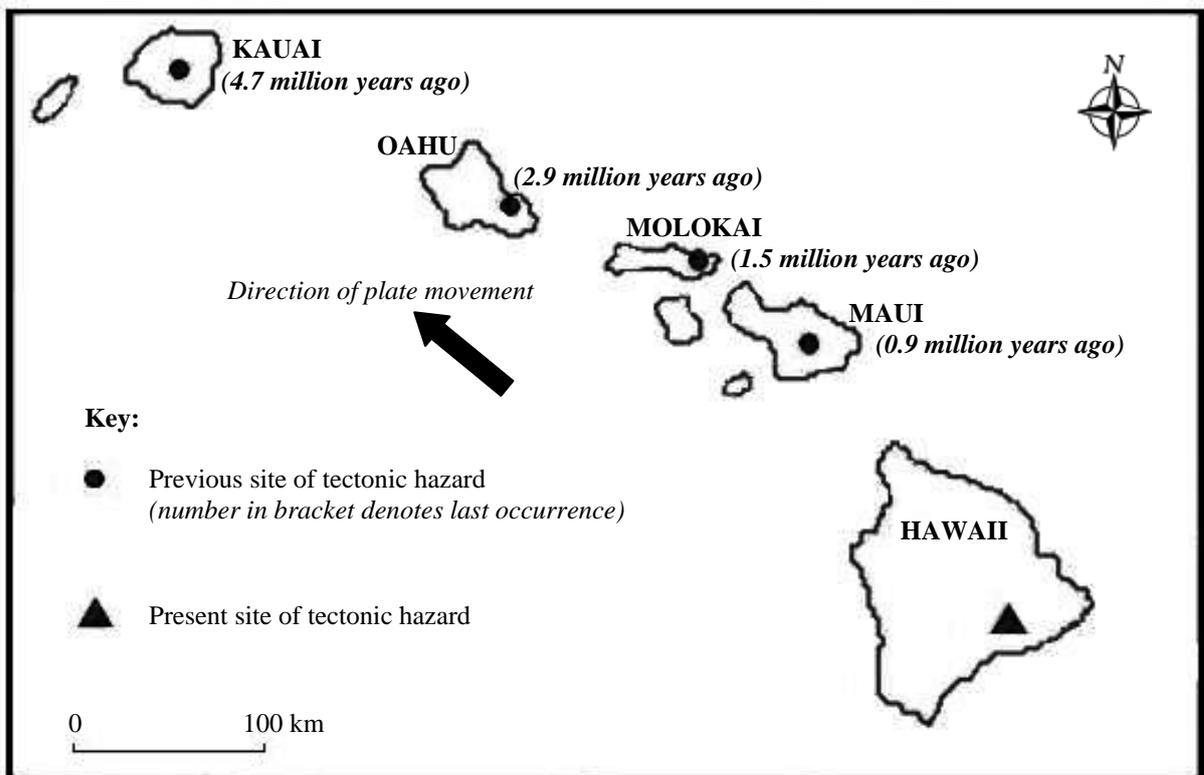
(i) Name plates X and Y. (2 marks)

(ii) How is the location of the tectonic hazard at region B different from that at region A? (1 mark)

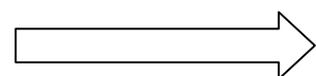
(iii) Explain the occurrence of the tectonic hazard at region A. (6 marks)

(iv) Compare and contrast the impact of the tectonic hazard at regions A and B. (4 marks)

Figure 1b



(b) Refer to Figures 1a and 1b. Explain how the tectonic hazard changes with time and space. (5 marks)



2. Study the map extract of Hong Kong (1:20 000) provided. A student used the map extract for a field study on Tsing Yi Island. Grid squares 9974 and 0274 show the heavy industrial district and light industrial district on Tsing Yi Island respectively. Table 2 shows some records of the field study.

**Table 2**

## RECORD FORM OF FIELD STUDY

Date: day / month / 2011  
Site: Tsing Yi Island (grid square 0274)

Time: 2 p.m. to 4 p.m.

Issues for Enquiry

- Land use changes of light industrial district on Tsing Yi Island in the past 30 years
- Study on the feasibility of developing the district into an IT industrial district

Record of Information

Interview with a security officer of ABC Industrial Building:

- floors in the 1980s mainly occupied by textile, garment and dyeing factories
- large factory with considerable scale
- most factories moved to the Mainland in the 1990s

### Utilisation of Floor Space at ABC Industrial Building

**1981**

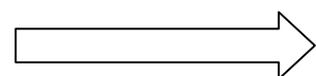
Floor								
11	F							
10	F	F						
9			F		F			
8								
7		F						
6	F			F				
5			F			F		
4								
3	F		F					
2		F		F		F		
1	F							
	1	2	3	4	5	6	7	8

**2011**

Floor								
11								
10								
9								
8								
7								
6			F				F	F
5								
4								
3	F			F				
2								F
1	F							F
	1	2	3	4	5	6	7	8

	professional service		office		warehouse
	vacant		factory		

- (a) Study the map extract (1:20 000) provided. Using map evidence, explain the favourable factors for the development of heavy industries in grid square 9974. (6 marks)
- (b) Study Table 2.
- (i) Describe the changes of economic activities in the area in the past 30 years. (2 marks)
- (ii) Explain the changes of economic activities in (b) (i). (2 marks)
- (c) The student suggested developing the area of grid square 0274 into an IT industrial district. Using map evidence, discuss the
- (i) advantages; and (4 marks)
- (ii) limitations (4 marks)
- of developing IT industry in the area.

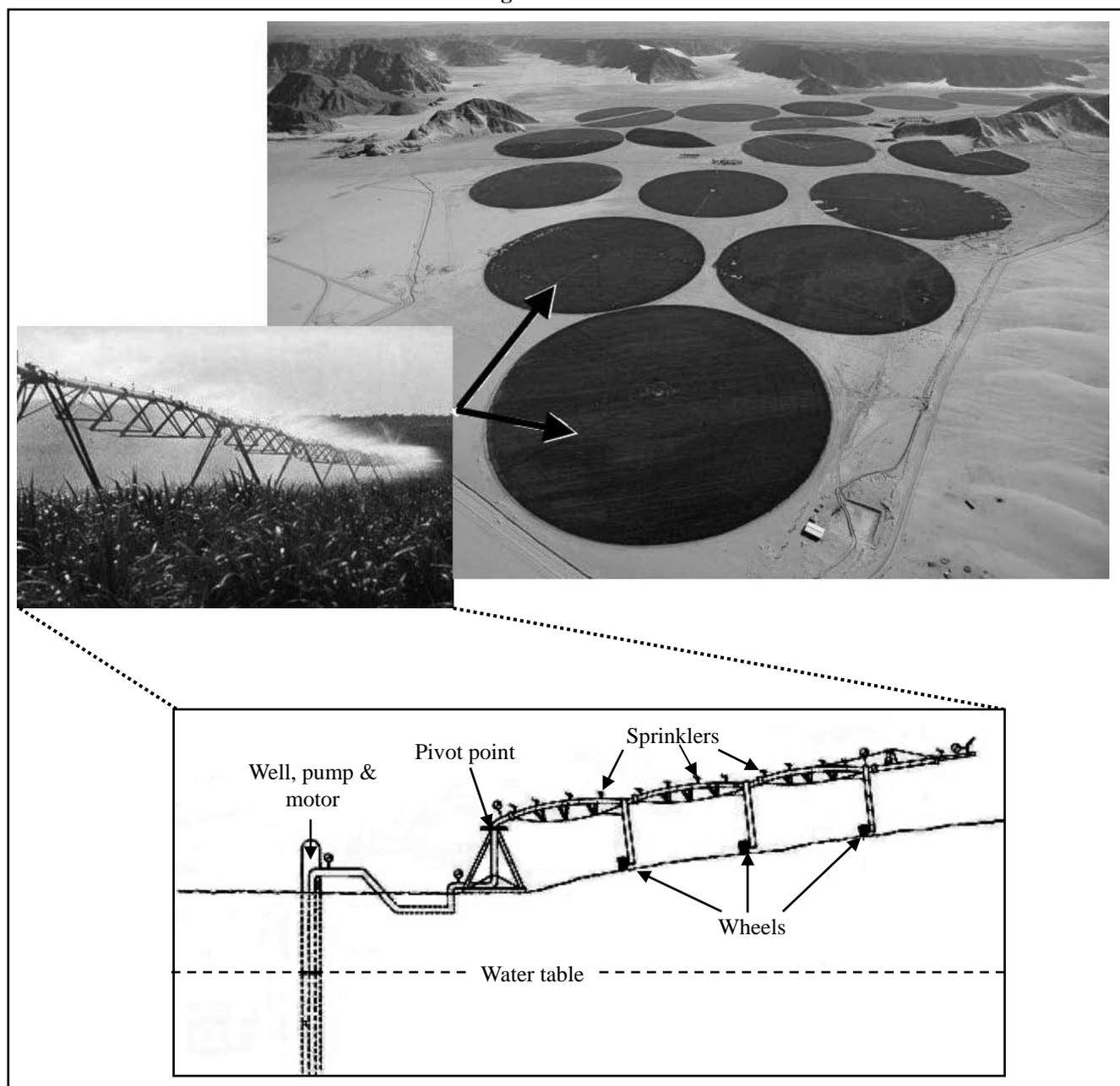


3. Table 3a shows the climatic information of area X in a less developed country. Figure 3b shows an example of farming technology.

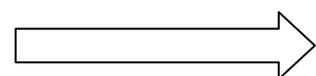
**Table 3a**

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean temperature (°C)	23.5	26.0	30.0	33.0	33.0	31.0	28.0	26.5	28.0	29.0	27.0	24.5
Rainfall (mm)	0	0	0.3	10.3	25.8	50.3	144.0	174.4	84.3	20.3	0.1	0

**Figure 3b**



- (a) Refer to Table 3a.
- (i) **On a piece of graph paper**, draw the climatic graph of area X. (4 marks)
  - (ii) What climatic constraints might the farming activities in area X encounter? (3 marks)
- (b) Refer to Table 3a and Figure 3b.
- (i) Explain how the farming technology shown in Figure 3b alleviates the climatic constraints in area X. (3 marks)
  - (ii) What positive and negative socio-economic impact might the technology shown in Figure 3b bring to area X? (4 marks)
- (c) Evaluate the effectiveness of adopting genetic modification technology to alleviate the climatic constraints of farming in area X. (4 marks)



4. Photographs in Figure 4a were taken in Switzerland in three different years. Figure 4b shows the energy consumption in China from 1990 to 2009.

Figure 4a

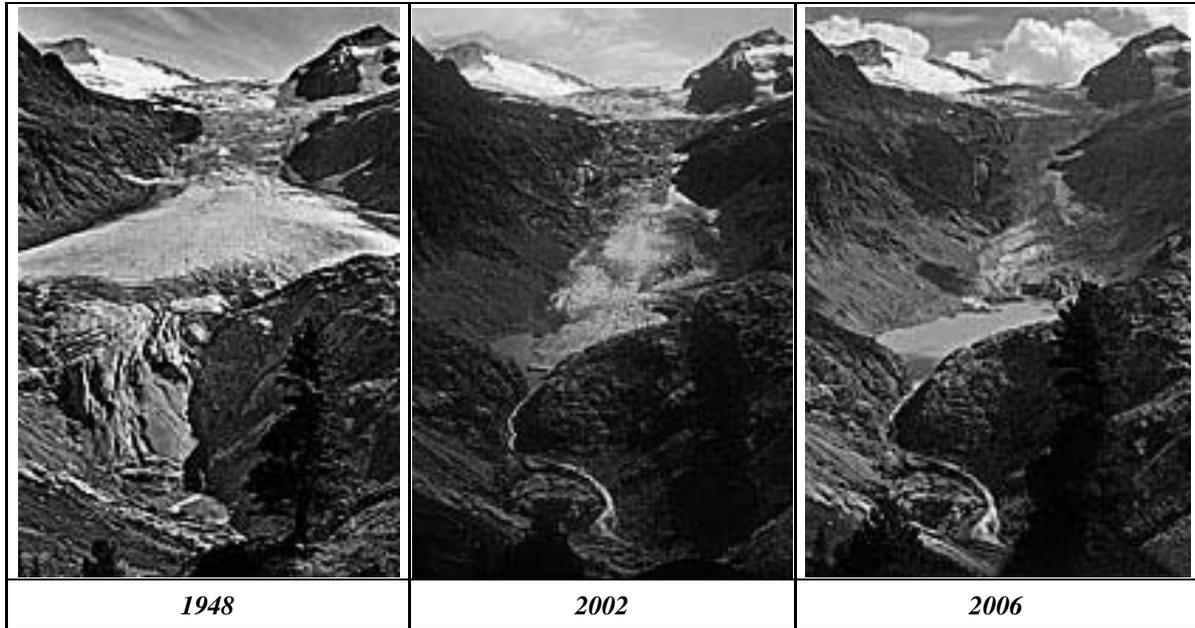
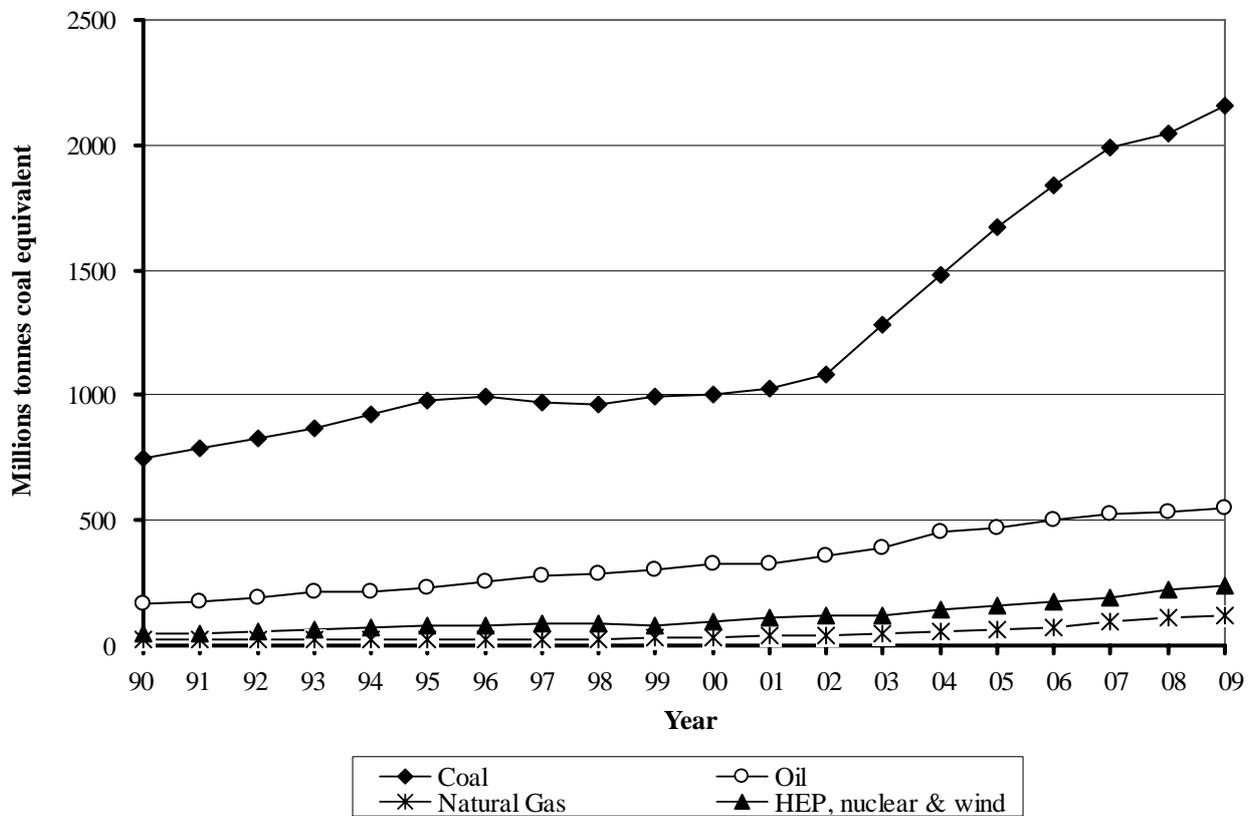


Figure 4b



(a) Refer to Figure 4a.

(i) Describe the changes of the natural environment. (2 marks)

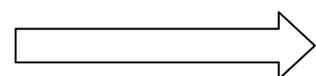
(ii) Account for the short-term and long-term impact on the farming community nearby brought by the changes in the natural environment. (5 marks)

(b) Refer to Figure 4b.

(i) Describe the trend of the energy consumption in China since 1990. (2 marks)

(ii) In terms of the atmospheric energy budget, how does the trend of energy consumption in China associate with the changes of the natural environment in Switzerland? (5 marks)

(iii) Comment on the strategies of energy consumption that the Chinese government could adopt to slow down the changes described in (a) (i). (4 marks)



**Section C: Answer any ONE question from this section. Each question carries 12 marks.**

5. *The government may adopt hard or soft strategies to protect coasts.*

Explain how hard strategies protect coasts. Using beach nourishment as an example, discuss whether soft strategies are more effective than hard strategies in the protection of coasts. (12 marks)

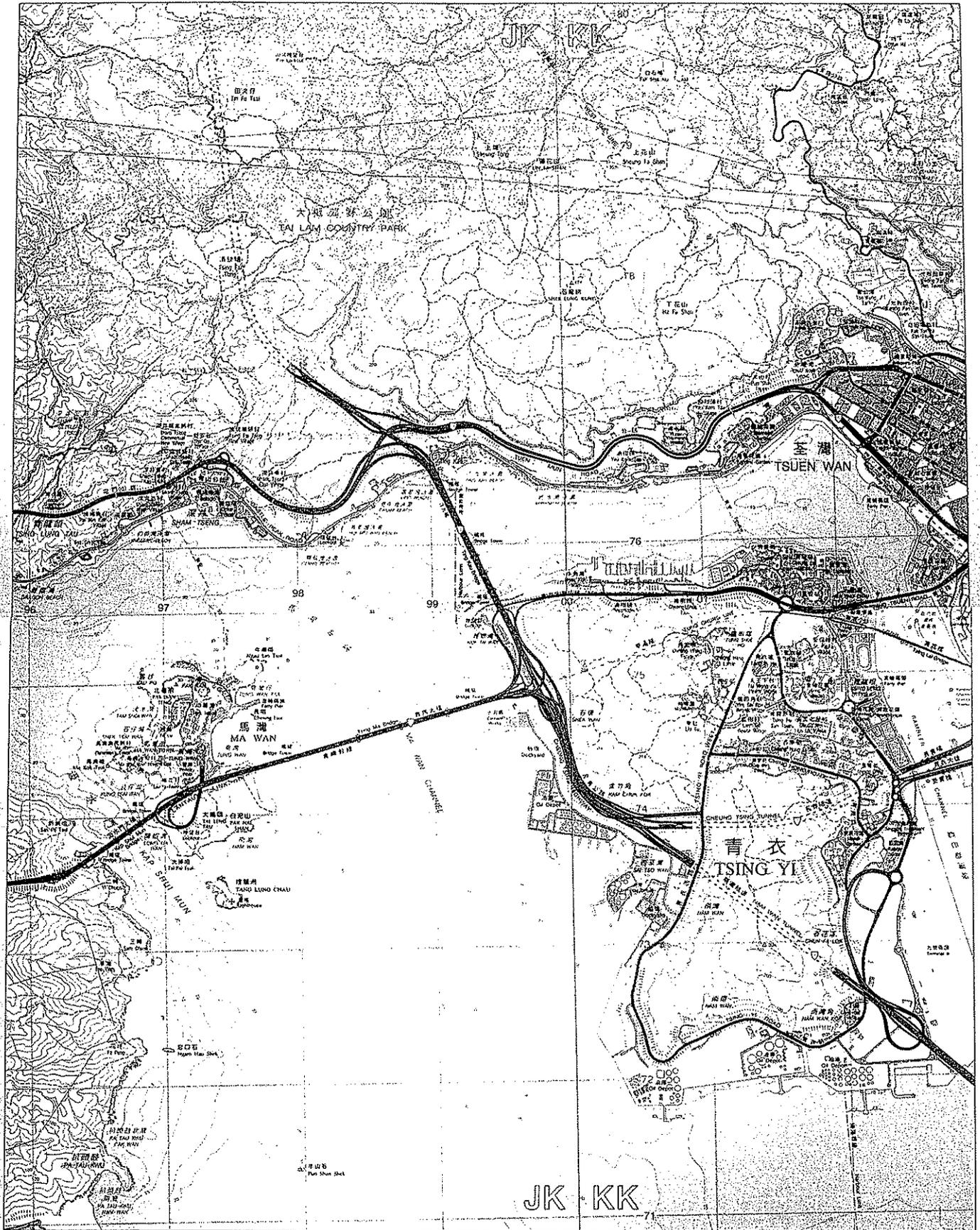
6. In what ways have the concepts of sustainable development been applied to urban renewal projects in Hong Kong? Comment on the difficulties that the HKSAR Government faces in adopting these concepts in urban renewal. (12 marks)

7. Explain the relative importance of biomass in the nutrient cycle of tropical rainforests. Discuss how modern farming practices affect the nutrient cycle in tropical rainforests. (12 marks)

**END OF PAPER**

Sources of materials used in this paper will be acknowledged in the *Hong Kong Diploma of Secondary Education Examination Practice Papers* published by the Hong Kong Examinations and Assessment Authority at a later stage.

地圖 (卷一甲部第 1 至 5 題及乙部第 2 題用)  
Map Extract (for Paper 1 Section A Questions 1 to 5 and Section B Question 2)



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比例尺 1 : 20 000 SCALE



此地圖必須與答題簿一併交回  
THIS MAP MUST BE HANDED IN WITH YOUR ANSWER BOOK