

GEOGRAPHY PAPER 1

8:30 am – 11:15 am (2¾ hours)

This paper must be answered in English

GENERAL INSTRUCTIONS

- This paper consists of **FOUR** sections:
 - Section A** – consists of 20 multiple-choice questions. Answer **ALL** questions in this section.
 - Section B** – consists of a **COMPULSORY** fieldwork-based question (Question 1).
 - Section C** – consists of 4 data / skill-based structured questions (Questions 2 to 5). Attempt any **TWO** questions in this section.
 - Section D** – consists of 3 short essay questions (Questions 6 to 8). Attempt any **ONE** question in this section.
- Draw sketch maps and diagrams to supply additional, relevant information when appropriate.
- A map extract is provided and to be returned to the HKEAA at the end of the examination.
- Answers to Section A should be marked on the Multiple-choice Answer Sheet. Answers to Sections B, C and D 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, C and D must be handed in separately at the end of the examination.**

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 20 questions in this section. Answer ALL questions in this section. All the answers must be marked on the Answer Sheet.

Refer to the map extract of Hong Kong (1:20 000) provided to answer Questions 1 to 6.

1. In grid square 0885, there is a _____.

- (1) clinic
- (2) declared monument
- (3) police station

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

Refer to the section of the footpath from the junction at 063831 to the secondary road at 068844 to answer Questions 2 and 3.

2. Which of the following is the average gradient of this section of the footpath?

- A. 1:2.8
- B. 1:3.2
- C. 1:4.3
- D. 1:4.9

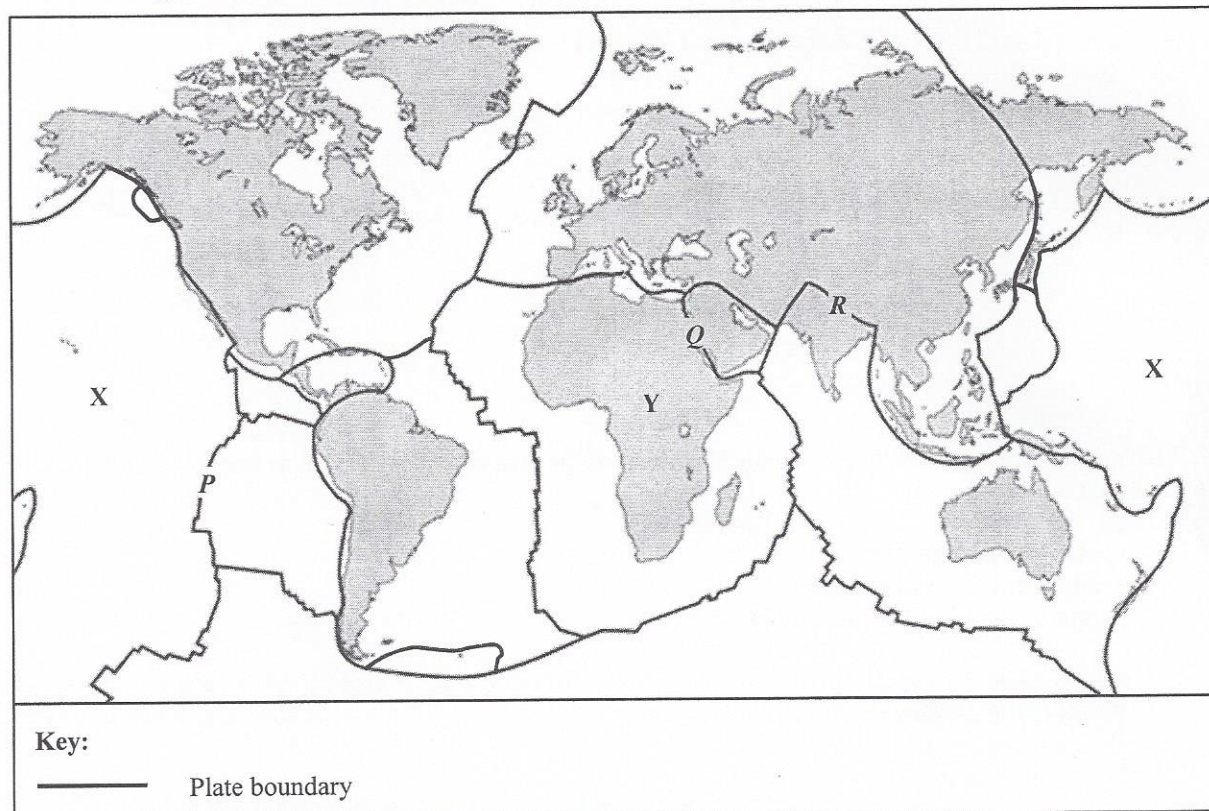
3. This section of the footpath passes through _____.

- (1) a concave slope
- (2) a convex slope
- (3) a spur

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

4. Which of the following places is/ are intervisible with spot height 679 (062818)?
- (1) the trigonometrical station at Grassy Hill (082811)
 - (2) spot height 729 (041821)
 - (3) the lookout at 031812
- A. (1) only
 - B. (3) only
 - C. (1) and (2) only
 - D. (2) and (3) only
5. Which of the following are the favourable conditions of the area east of easting 09 and north of northing 85 for industrial development?
- (1) convenient sea transport
 - (2) availability of reclaimed land
 - (3) proximity to public housing estates
- A. (1) and (2) only
 - B. (1) and (3) only
 - C. (2) and (3) only
 - D. (1), (2) and (3)
6. Which of the following statements are correct with reference to the country park management centre at 097830?
- (1) The trigonometrical station at 091835 is to its northwest.
 - (2) The reduced bearing from it to the temple in grid square 1083 is $N 21^\circ E$.
 - (3) The whole circle bearing from it to the trigonometrical station at 105827 is 109° .
- A. (1) and (2) only
 - B. (1) and (3) only
 - C. (2) and (3) only
 - D. (1), (2) and (3)

Refer to the figure below to answer Questions 7 and 8.



7. Which of the following statements of plates X and Y is/ are correct?

- (1) Plate X is thinner than plate Y.
 - (2) Plate X is less dense than plate Y.
 - (3) Both plates X and Y consist of oceanic crust.
- A. (1) only
 - B. (2) only
 - C. (1) and (3) only
 - D. (2) and (3) only

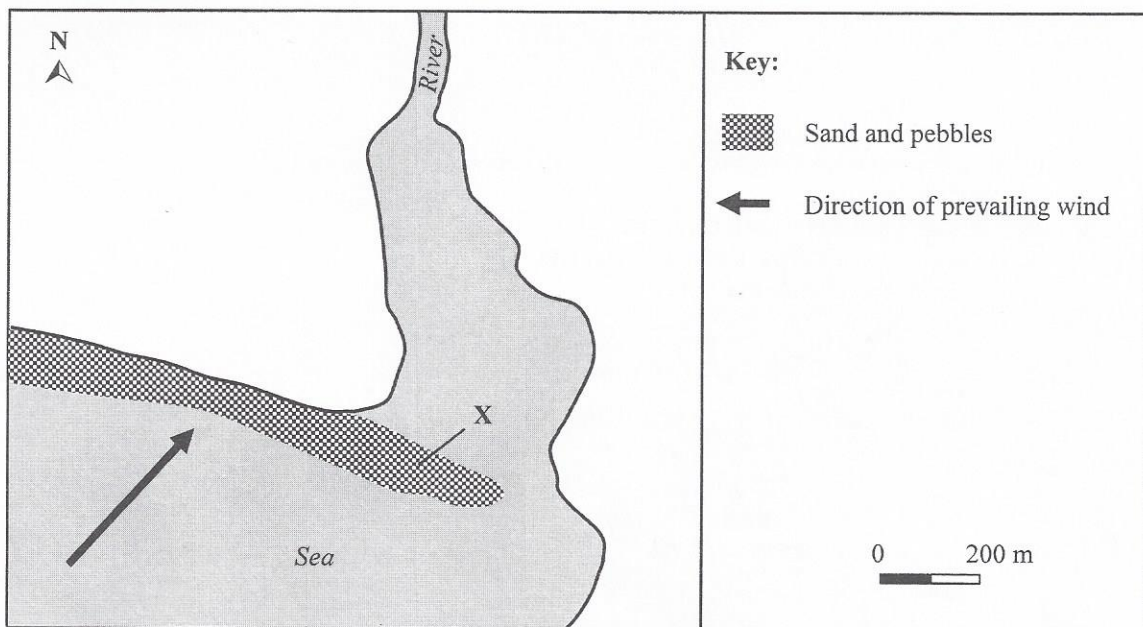
8. Which of the following are the landform features found respectively at plate boundaries P, Q and R?

	Plate boundary P	Plate boundary Q	Plate boundary R
A.	fold mountain	mid-oceanic ridge	rift valley
B.	mid-oceanic ridge	rift valley	fold mountain
C.	mid-oceanic ridge	fold mountain	rift valley
D.	rift valley	mid-oceanic ridge	fold mountain

9. Which of the following are the factors affecting coastal erosion?

- (1) wave energy
 - (2) rock resistance
 - (3) offshore gradient
- A. (1) and (2) only
B. (1) and (3) only
C. (2) and (3) only
D. (1), (2) and (3)

10. Refer to the figure below.



Which of the following are the factors for the formation of feature X shown in the above figure?

- (1) abundant sediment
 - (2) shape of coastline
 - (3) wind direction
- A. (1) and (2) only
B. (1) and (3) only
C. (2) and (3) only
D. (1), (2) and (3)

Refer to the statement below to answer Questions 11 and 12.

'The manufacturing plants in Hong Kong were relocated to the Mainland in the 1980s.'

11. Which of the following were the reasons of such a relocation?

- (1) higher wages in Hong Kong
- (2) insufficient infrastructure in Hong Kong
- (3) setting up of Special Economic Zones in the Mainland

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

12. Which of the following were the impacts of such a relocation to Hong Kong?

- (1) Some factory buildings were left vacant.
- (2) There was a rapid rise in the unemployment rate.
- (3) There was renewal in industrial areas.

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

13. Which of the following is/ are the feasible way(s) of treating municipal solid waste in Hong Kong in the long run?

- (1) modern incineration
- (2) landfilling
- (3) recycling

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

14. Which of the following practices help Hong Kong to be a sustainable city?

- (1) treatment of sewage
- (2) use of green energy
- (3) lowering of building density and height

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

15. Refer to the photograph below.



Which of the following descriptions of the agricultural activity as shown in the above photograph are correct?

- (1) labour intensive
- (2) high energy input
- (3) monoculture

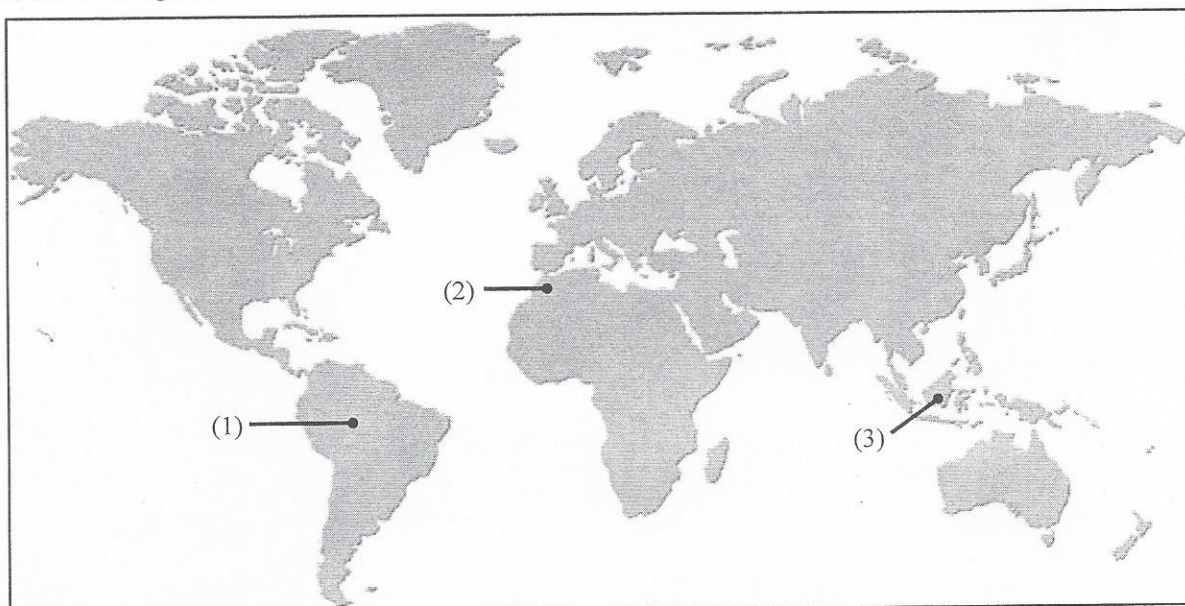
- A. (1) and (2) only
- B. (1) and (3) only
- C. (2) and (3) only
- D. (1), (2) and (3)

16. Which of the following is/ are the reason(s) of more frequent famines occurring in some African countries?

- (1) weak in tackling natural hazards
- (2) massive use of chemical fertilisers
- (3) rapid urban growth

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

17. Refer to the figure below.



Tropical rainforests can be found at areas _____.

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

18. Refer to the photograph below which shows a human activity in a tropical rainforest.



Which of the following changes to the tropical rainforest's microclimate are a result of the human activity shown in the above photograph?

- (1) increase in wind speed
- (2) increase in diurnal range of temperature
- (3) increase in relative humidity

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

19. Which of the following is/ are evidence of global warming?

- (1) retreat of glaciers
- (2) intensification of storms
- (3) delay in plant germination

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

20. Which of the following are the factors that affect the amount of solar energy absorbed at a place in the temperate regions?

- (1) altitude
- (2) aspect
- (3) nature of land surface

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

END OF SECTION A

Section B: The fieldwork-based question is COMPULSORY. This question carries 18 marks.

1. A group of students carried out a geographical field study related to urban environmental quality in an area. Figure 1a is the guideline of this field study. Figure 1b shows different land uses in the area and the field study sites selected by the students. Table 1c shows the scores of environmental quality collected at the field study sites.

Figure 1a

Field study topic: To study the relationship between land use and environmental quality

Data collection method: (1) Select 10 field study sites within the study area to collect data.
 (2) Carry out an assessment at each field study site according to the 'Urban Environmental Quality Assessment Form' below.

Urban Environmental Quality Assessment Form

Environmental quality	Scores (Good: 3 / Moderate: 2 / Poor: 1)
Green space	
Noise level	
Air quality	
Sanitary condition	

Figure 1b

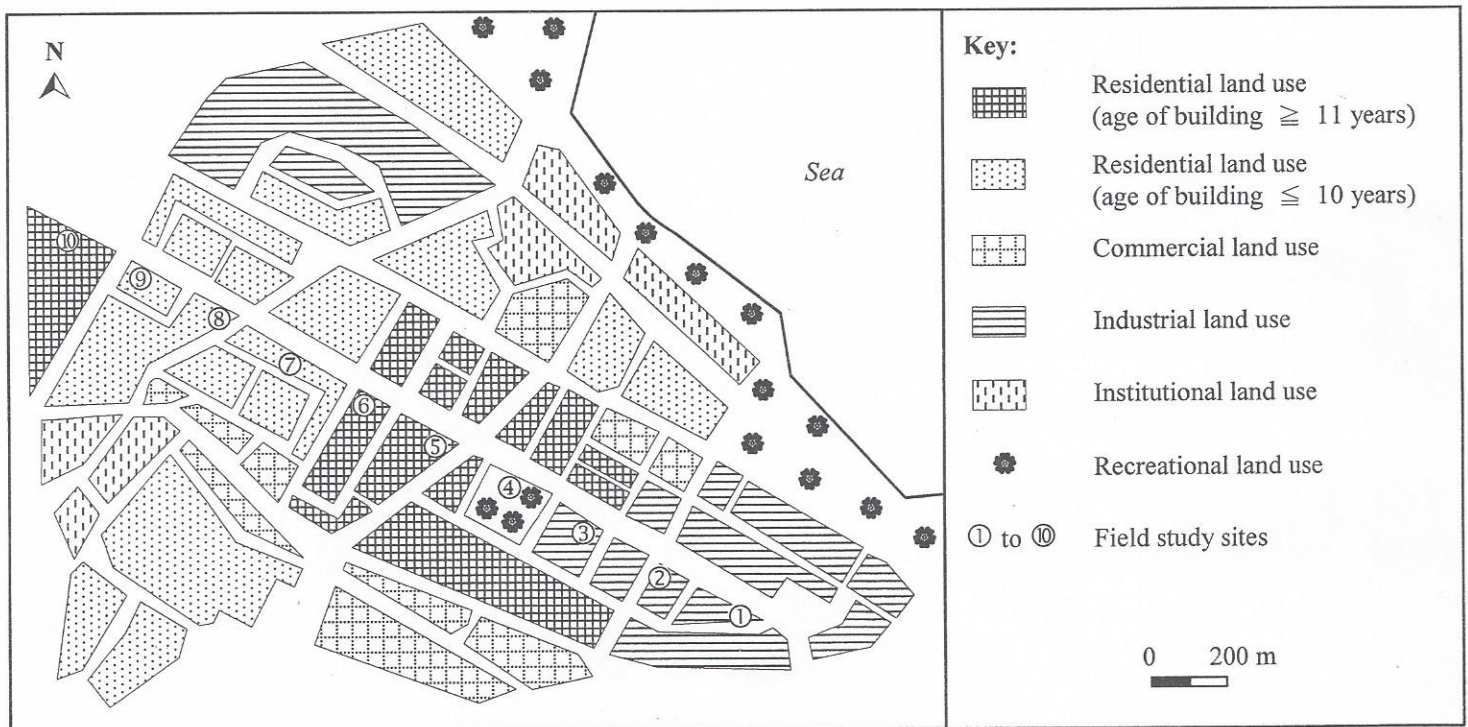


Table 1c

Field study site	Scores of environmental quality				Field study site	Scores of environmental quality			
	Green space	Noise level	Air quality	Sanitary condition		Green space	Noise level	Air quality	Sanitary condition
①	2	2	1	1	⑥	1	2	2	2
②	2	2	1	1	⑦	3	2	2	3
③	2	1	2	1	⑧	3	2	3	3
④	3	3	3	3	⑨	3	2	2	2
⑤	2	1	2	2	⑩	3	2	2	2

- (a) Refer to Figure 1a.

What are the merits and demerits of using the 'Urban Environmental Quality Assessment Form' to collect data? (4 marks)

- (b) Refer to Figures 1a and 1b.

Account for the merits and demerits of the method of selecting field study sites used by the students. (4 marks)

- (c) The students composed a field study report with the hypothesis: 'The environmental quality of industrial land use is poorer than that of other land uses'.

Refer to Figure 1b and Table 1c.

Describe how to process and utilise the data collected to complete the field study report. (4 marks)

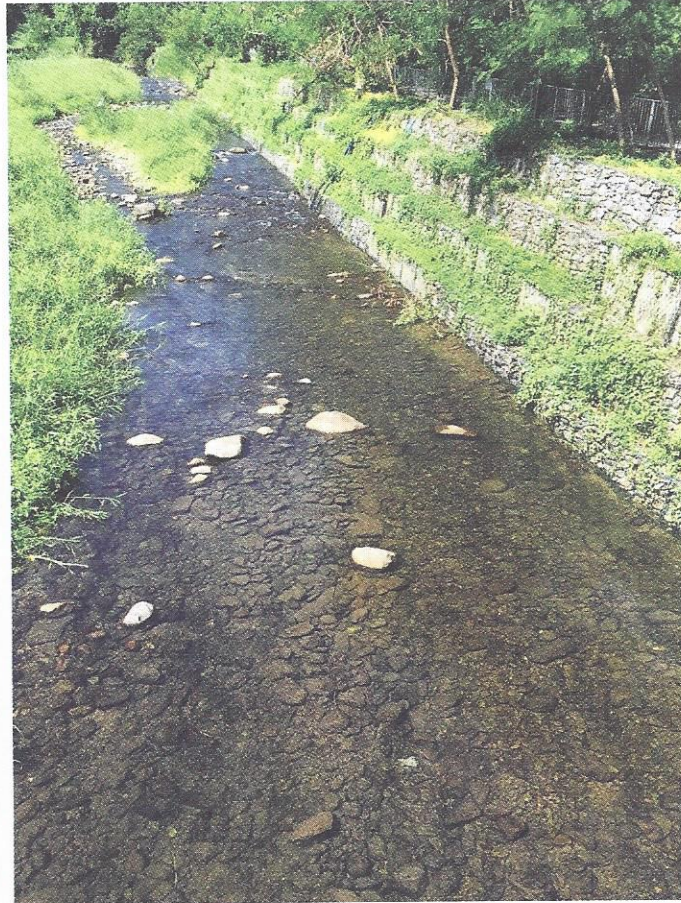
- (d) Refer to Figures 1a and 1b.

Describe and explain how to redesign the data collection method to raise the validity and reliability of the field study. (6 marks)

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

2. Refer to the map extract (1:20 000) of Hong Kong which shows part of Tai Po district. Photographs 2a and 2b show the current river channels at sites P (054861) and Q (076853) respectively.

Photograph 2a



Photograph 2b



- (a) Refer to the map extract (1:20 000) of Hong Kong.

Identify the fluvial feature at the river section from 053858 to 055861 and draw annotated diagram(s) to explain its formation. (6 marks)

- (b) Refer to Photograph 2a, Photograph 2b and the map extract (1:20 000) of Hong Kong.

Different river management strategies have been adopted at sites P and Q to lower the risk of flooding.

- (i) Quote map evidence to explain why there is a need to manage the river channel at site P. (5 marks)
- (ii) Explain how the river management strategy adopted at site P may lower the risk of flooding. (3 marks)
- (iii) With reference to the physical and human settings at sites P and Q, discuss whether the river management strategy as shown in Photograph 2b is more appropriate for site P. (4 marks)

3. Figure 3a shows the locations of some iron and steel plants of corporation X and some information of China. Figure 3b shows the locations of some production units of IT corporation Y. Table 3c shows the information of some countries in 2018.

Figure 3a

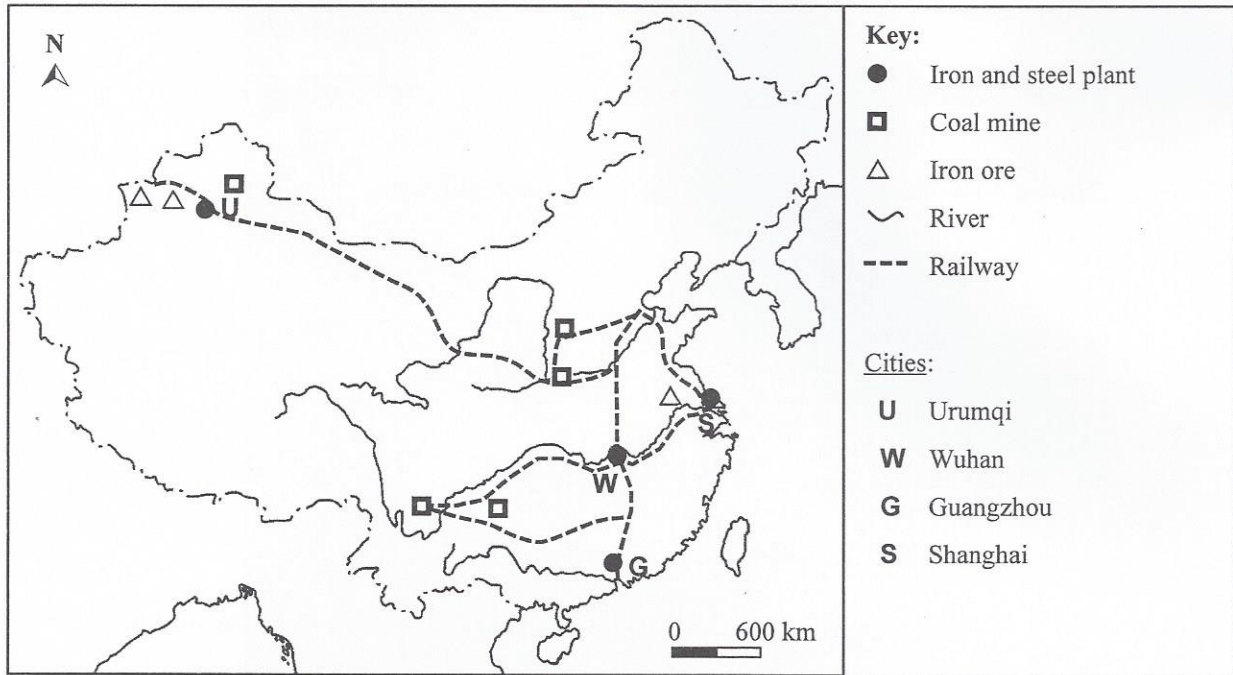


Figure 3b

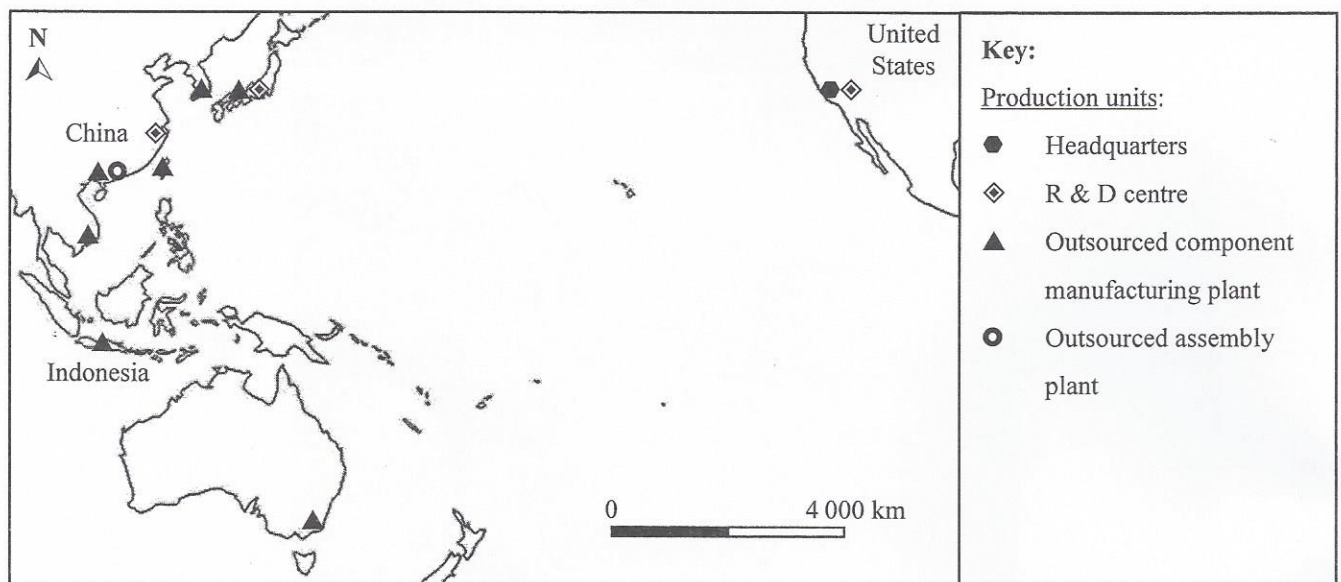


Table 3c

	United States	China	Indonesia
Percentage of population with tertiary education	42	16	12
Average annual wages of manufacturing workers (USD)	37 188	7 800	1 304
GDP per capita (USD)	62 795	9 771	3 894
Number of top ten* IT corporations in the world	7	2	0

(* One in South Korea)

- (a) Refer to Figure 3a.

Describe and explain the locations of the iron and steel plants respectively at Urumqi and Shanghai.

(6 marks)

- (b) Refer to Figure 3b and Table 3c.

(i) Describe the characteristics of the mode of production of corporation Y. (2 marks)

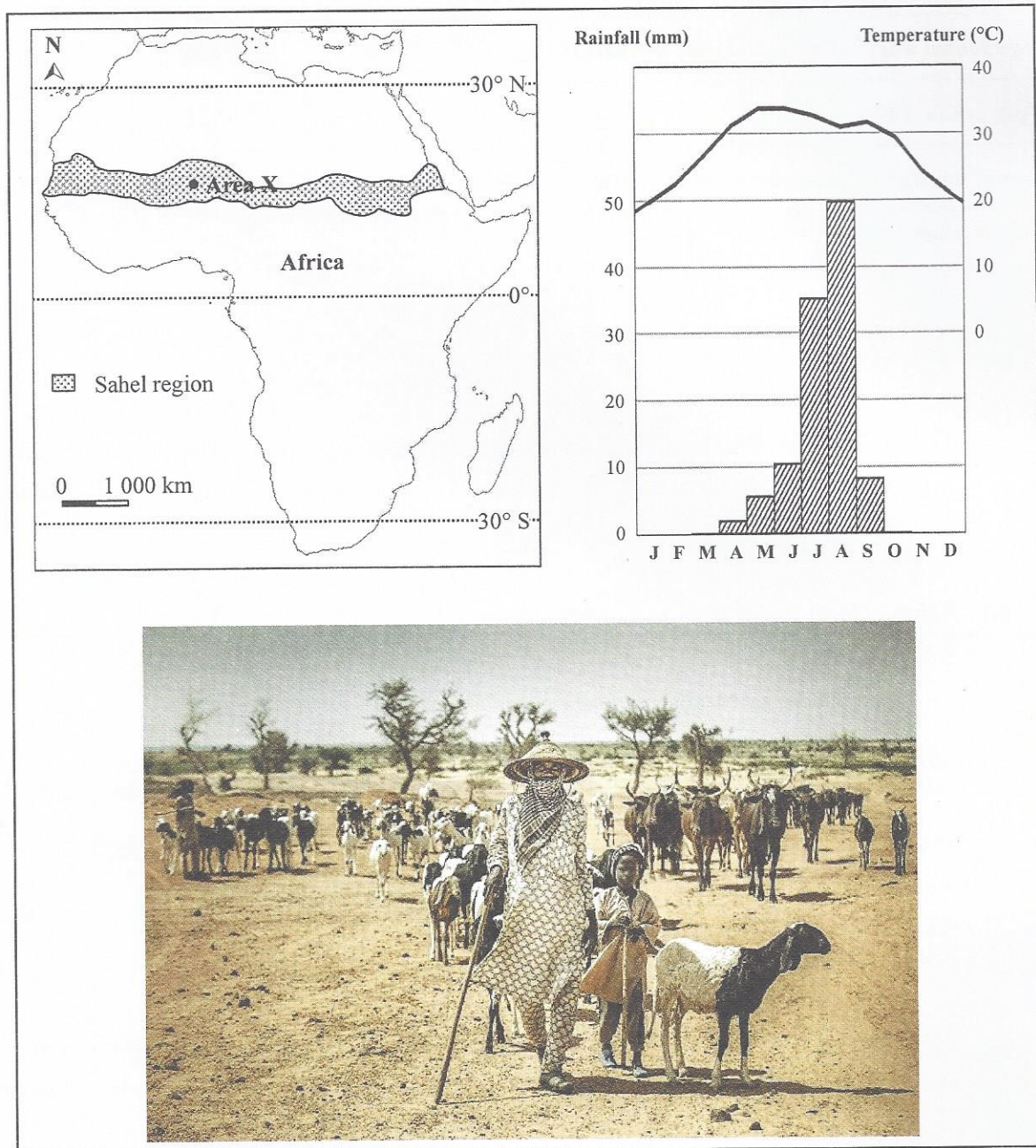
(ii) Account for the spatial distribution of different production units of corporation Y under this mode of production. (6 marks)

- (c) Refer to Figures 3a and 3b.

With reference to the nature of industries and the locational factors, discuss whether corporation X may adopt the mode of production of corporation Y. (4 marks)

4. Figure 4a shows the location, climatic conditions and a local agricultural activity of area X. Figure 4b shows the location of area Y and a large scale irrigation project and an agricultural activity of the area.

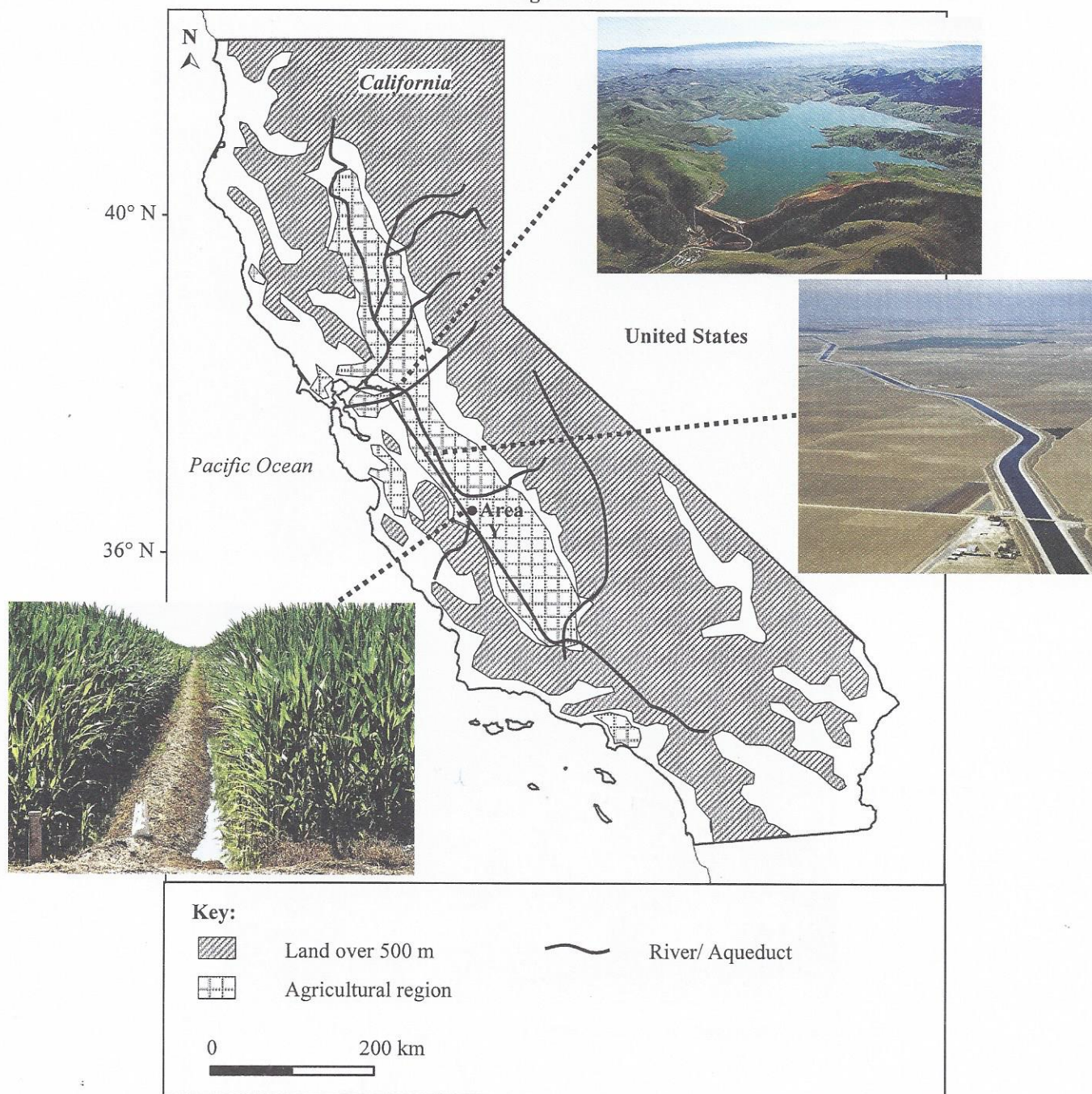
Figure 4a



(a) Refer to Figure 4a.

- (i) Identify the agricultural activity of area X and describe its characteristics. (4 marks)
- (ii) With reference to the physical and human settings of area X, explain why the above agricultural activity fails to produce sufficient food for the local people. (6 marks)

Figure 4b



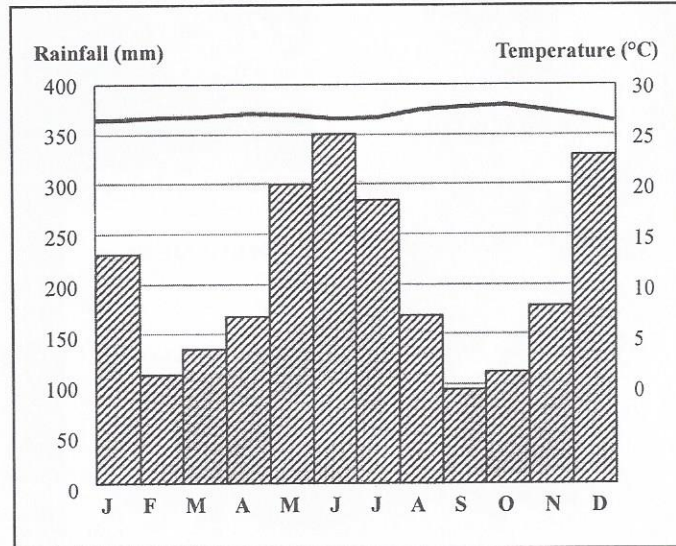
(b) *The climatic conditions of areas X and Y are similar.*

Refer to Figures 4a and 4b.

- Explain why the output of the agricultural system of area Y is higher than that of area X. (4 marks)
- Discuss whether the problem of food shortage in area X could be solved if the agricultural system of area Y were adopted there. (4 marks)

5. Figure 5a shows the climatic conditions of a tropical rainforest. Photograph 5b shows a cattle ranch in a tropical rainforest area. Figure 5c shows the nutrient cycle in an ecosystem. Photograph 5d shows an ecotourism activity in the tropical rainforest.

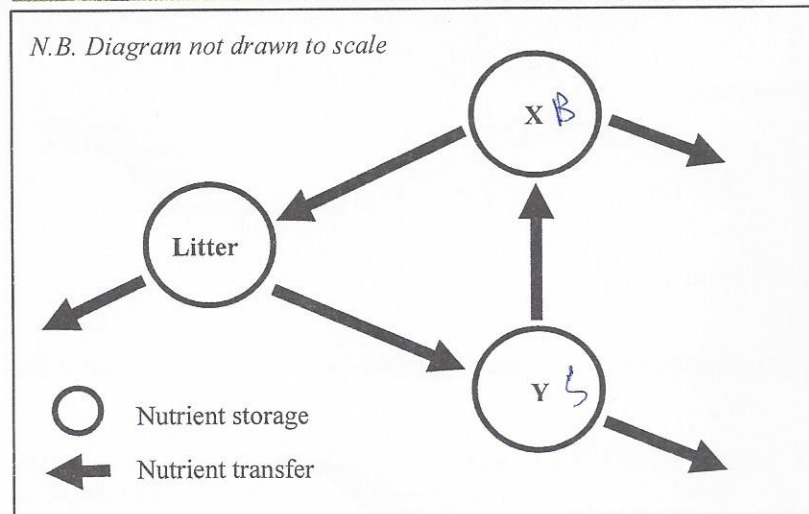
Figure 5a



Photograph 5b



Figure 5c



Photograph 5d



- (a) Refer to Figure 5a and Photograph 5b.

Describe and explain the vegetation characteristics in a tropical rainforest.

(6 marks)

- (b) Refer to Photograph 5b and Figure 5c.

(i) Account for the impacts of cattle ranching on nutrient storage X.

(4 marks)

(ii) Explain why nutrient storage Y may diminish after a long period of cattle ranching.

(4 marks)

- (c) Refer to Photographs 5b and 5d.

There is a proposal to abandon the cattle ranch and restore it to a tropical rainforest in order to develop ecotourism as shown in Photograph 5d.

Discuss the feasibility of this proposal.

(4 marks)

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

6. Describe and explain how earthquakes and volcanic eruptions occur at convergent plate boundaries. Discuss whether land use zoning is more effective in reducing loss resulting from volcanic eruptions than that of earthquakes. (12 marks)

7. Account for the decay of the old urban areas in Hong Kong. Discuss whether redevelopment is the most appropriate urban renewal strategy in these areas. (12 marks)

8. Account for the rising trend of global greenhouse gas emissions since the 1950s. Discuss whether technology can help slow down the rising trend of atmospheric greenhouse gases. (12 marks)

END OF PAPER

Sources of materials used in this paper will be acknowledged in the *HKDSE Question Papers* booklet published by the Hong Kong Examinations and Assessment Authority at a later stage.