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ZHONGHUA SECONDARY SCHOOL PRELIMINARY EXAMINATION 2016

FULL GEOGRAPHY

2236/01

Paper 1

13 September 2016

Secondary 4 Express

1 hour 40 minutes

Additional Materials: Writing Paper
Graph paper
1 Insert
Map of North York Moors

READ THESE INSTRUCTIONS FIRST

Write your index number, class and name on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Section A

Answer **Question 1**.

Section B

Answer **one** question.

Write all answers on the writing paper provided.
Candidates should support their answers with the use of relevant examples.
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

The Insert contains Photograph A and Fig. 2 for Question 2, Photograph B, Fig. 3A and Fig. 3B and Photograph C for Question 3.

Start your answers to each question on a fresh sheet of paper.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [] at the end of each question or part question.

For Examiner's Use	
Section A	/25
Section B	/25
Total	/50

This document consists of 4 printed pages and 1 Insert.

Section A

This question is compulsory.

1. (a) Students from a school collected data along a beach to investigate the hypothesis: "The more frequent the waves, the larger the beach sediment size".

The students measured wave frequency and the results are shown in Table 1.

Wave frequency at 4 sites

Site	Waves per minute
A	8
B	20
C	11
D	5

Table 1

- (i) What precautions should the students take to ensure accuracy in measuring wave frequency? [2]
- (ii) Using evidence from Table 1, what conclusions on the type of waves can the students draw? [2]
- (iii) The students took samples every two metres along the beach transects and the results of the average size of the beach sediment samples at 6m from the low water mark is shown in Table 2 below.

Results of sampling of beach sediment at 6m from the low water mark

Average size of beach sediment along long axis (mm)				
	Transect at site A	Transect at site B	Transect at site C	Transect at site D
Distance from low water mark at 6m	40	94	60	50

Table 2

Describe how the data in Table 2 was collected using a quadrat. [4]

- (iv) What conclusions can be drawn from the information in Table 1 and Table 2 in response to the hypothesis "The more frequent the waves, the larger the beach sediment size"? Justify your answer. [2]
- (v) Using information in Table 1 and Table 2, draw a scatter graph to show the relationship between wave frequency and beach sediment size on the graph paper provided. [3]

- (vi) Suggest two other types of data the students could have collected to strengthen their investigation. [2]

- b The students extended their study to the nearby coastal town, popular with locals and tourists to answer the guiding question "What are the economic impacts of tourism?"
One group of students devised a questionnaire as shown in Fig. 1 and conducted a pilot survey while another group conducted a land use survey along the main street of the town.

Questionnaire

Hello, may I ask you a few questions?	
1. Are you a tourist? Yes () No ()	
2. What is your average monthly income? _____	
3. What is your main purpose here?	
☐	Beach activities
☐	Food
☐	Shopping
☐	Sight seeing
4. Which country are you from? _____	
Thank you and have a nice day.	

Fig. 1

- (i) The teacher gave negative feedback on the questionnaire. Suggest 3 weaknesses in the questionnaire. [3]
- (ii) Explain the usefulness of a pilot survey. [2]
- (iii) Describe the use of land use survey and comment on its reliability to determine the economic impacts of tourism on the town. [5]

Section B

Answer one question from this section.

2. (a) Study the map extract, which shows the coastal area around Whitby. The scale of the map is 1: 25 000.
- State the bearing of the Heritage Centre (grid square 9010) from the Church with tower (grid square 8910). [1]
 - Contrast the coastal area to the west of Whitby with the coastal area to the east of Whitley. [3]
- (b) Study Photograph A (Insert), which shows some coastal landforms. Identify landform A and with the help of labelled diagram(s), describe the processes leading to its formation. [5]
- (c) Study Fig. 2 (Insert), which shows Coral At Risk in Asia-Pacific.
- (i) Use Fig. 2 to describe the location and account for corals at risk at the critical level. [6]
- (ii) Suggest how such threats to corals will pose difficulties to the people living near them. [2]
- (d) “Soft engineering measures are more appropriate to prevent coastal erosion for the Less Developed Countries.”
How far do you agree? Use examples to support your answer. [8]
3. (a) Study Photograph B (Insert), which shows a building as part of the heritage of a country.
- (i) Describe features of the building which reflect the country’s cultural heritage. [4]
- (ii) Explain the importance of preserving buildings and heritage sites for tourism. [4]
- (b) Study Fig. 3A and Fig. 3B (Insert), which show MICE (Meetings, Incentives, Conferences and Exhibitions) travellers and a write up about MICE in Indonesia respectively.
Use Fig. 3A to describe the trends for MICE travellers and Fig. 3B to explain how the Indonesian government can further develop the country as a MICE destination. [6]
- (c) Study photograph C, which shows an ecotourism destination.
With the help of photograph C, explain how ecotourism is sustainable. [3]
- (d) “Developments in technology is more important than demand factors in leading to the rapid growth in global tourism.”
How far do you agree? Use examples to support your answer. [8]



ZHONGHUA SECONDARY SCHOOL PRELIMINARY EXAMINATION 2016

FULL GEOGRAPHY

2236/01

Paper 1

29 August 2016

Secondary 4 Express

1 hour 40 minutes

INSERT

This Insert contains Photograph A and Fig. 2 for Question 2, Photograph B, Fig. 3A and Fig. 3B and Photograph C for Question 3.

This document consists of **4** printed pages.

Photograph A for Question 2

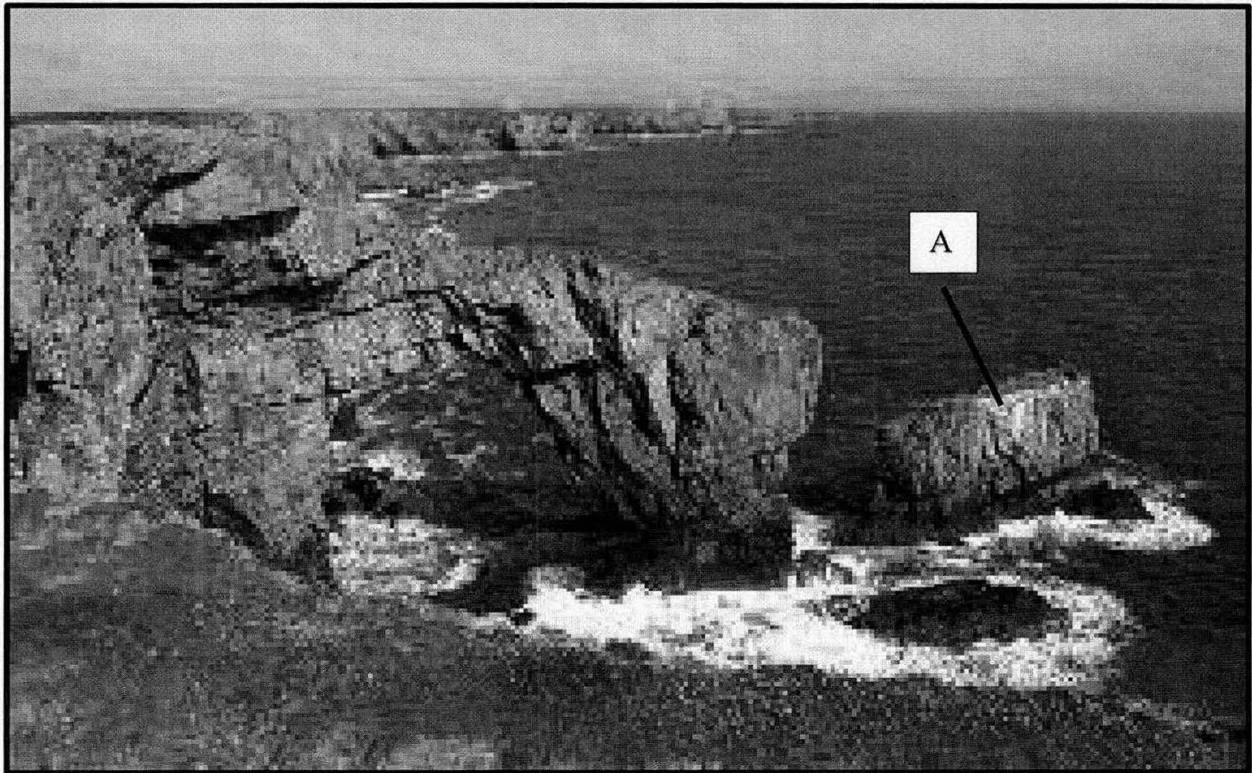
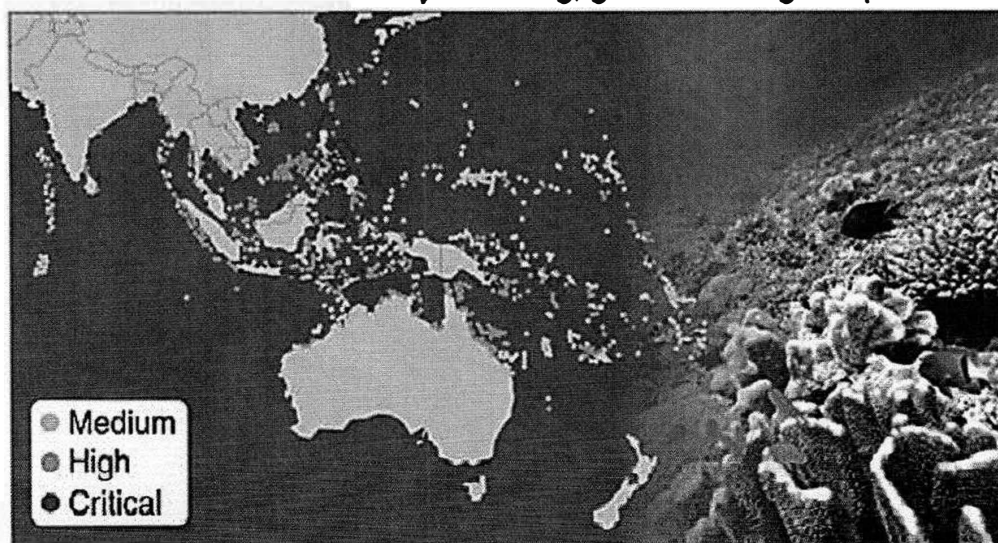


Fig. 2 for Question 2

Coral at risk

Asia-Pacific reefs threatened by bleaching, global warming and pollution



Source: World Resources Institute

AFP

Photograph B for Question 3

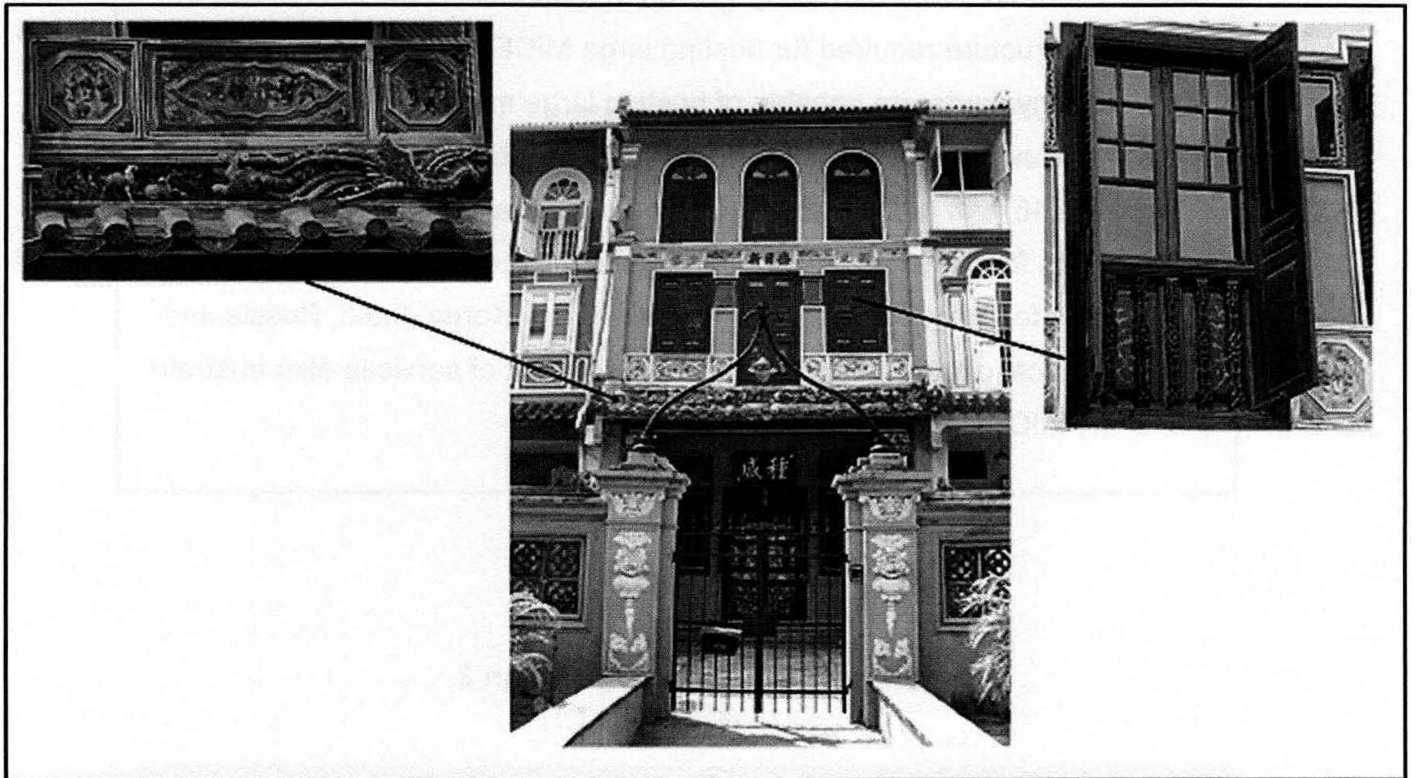


Fig. 3A for Question 3

Share of MICE travelers in Indonesia's total tourist arrivals

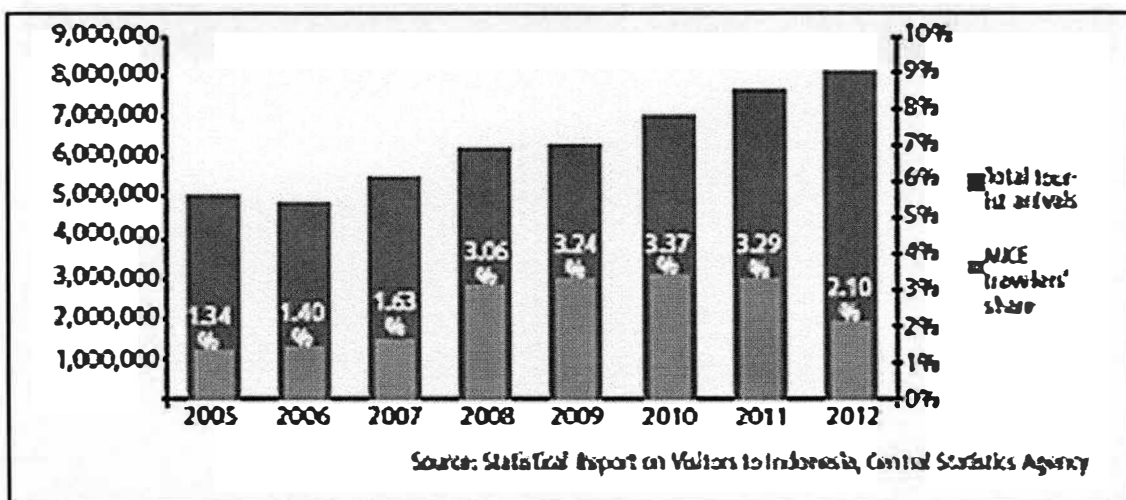


Fig. 3B for Question 3

One of the main barriers to MICE growth in Indonesia is the lack of world-class infrastructure required for hosting large MICE events. Only Jakarta, Bali and Yogyakarta are capable of hosting large meetings currently. In addition, connectivity and roads remain inadequate. The government had designated 16 new MICE destinations including Palembang, Balikpapan and Lombok for development. Indonesia's leading carrier, Garuda has made plans for daily flights to Jakarta from South Korea, India, Russia and China. Political circumstances and poor standards of services also frustrate and delay MICE development in Indonesia.

Photograph C for Question 3



ZHONGHUA SECONDARY SCHOOL PRELIMINARY EXAMINATION 2016

FULL GEOGRAPHY

ANSWER

2236/01

Paper 1

29 August 2016

Secondary 4 Express

1 hour 40 minutes

Additional Materials: Writing Paper
Graph paper
1 Insert
Map of North York Moors

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Section A

Answer Question 1.

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Answer one question.

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Start your answers to each question on a fresh sheet of paper.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [] at the end of each question or part question.

For Examiner's Use	
Section A	/25
Section B	/25
Total	/50

This document consists of 10 printed pages and 1 insert.

2

Section A

This question is compulsory.

1. (a) Students from a school collected data along a beach to investigate the hypothesis: "The more frequent the waves, the larger the beach sediment size".

The students measured wave frequency and the results are shown in Table 1.

Wave frequency at 4 sites

Site	Waves per minute
A	8
B	20
C	11
D	5

Table 1

- (i) What precautions should the students take to ensure accuracy in measuring wave frequency? [2]

- Ensure waves break on the same specific point on the shore/ranging pole/person for one minute.
- Repeat the steps 3 times before calculating the average number of waves per minute.
- Hold the ranging pole upright and do not sink into the sand (or points related to ranging pole).

Any 2 points @ 1m each

Accept plausible answer

- (ii) Using evidence from Table 1, what conclusions on the type of waves can the students draw? [2]

- Constructive waves at A and D (8 and 5 per min respectively) which is characteristic of constructive waves with wave frequency of 6 to 8 per minute.
- Destructive waves at B and C (20 and 11 per min respectively), which is characteristic of destructive waves with wave frequency of 10 to 14 per minute.

- (iii) The students took samples every two metres along the beach transects and the results of the average size of the beach sediment samples at 6m from the low water mark is shown in Table 2 below.

Results of sampling of beach sediment at 4 sites

Average size of beach sediment along long axis (mm)				
	Transect at site A	Transect at site B	Transect at site C	Transect at site D
Distance from low water mark at 6m	40	94	60	50

Table 2

Describe how the data in Table 2 was collected using a quadrat. [4]

- Identify a line of transect from the water edge to the top of the beach and place a quadrat at the interval eg 2m mark .
- 10 to 15 samples of pebbles are randomly picked from within the quadrat using a random number generator to pick a random number.
- Use a vernier caliper to measure the long axes of each pebble and record it.
- The average is then calculated.

- (iv) What conclusions can be drawn from the information in Table 1 and Table 2 in response to the hypothesis "The more frequent the waves, the larger the beach sediment size"? Justify your answer. [2]

- Hypothesis is supported/true to a large extent
Site A with lower wave frequency of 8 per min has smaller sediment size of 40mm, followed by site C (11 per min with sediment size of 60 mm) and then site B which has the highest wave frequency (20 per min) and correspondingly the largest sediment size (94mm).
- However Site D is an anomaly with a lower wave frequency count than A (5 verses 8 per min) but with a larger sediment size than Site A (50mm verses 40mm).

- (v) Using information in Table 1 and Table 2, draw a scatter graph to show the relationship between wave frequency and beach sediment size on the graph paper provided. [3]

- Title and labelling of correct axis.
- Accurate plotting of points.
- Line of best fit

- (vi) Suggest two other types of data the students could have collected to strengthen their investigation. [2]

- Wave steepness (wave height and wave length) will affect the strength of the waves to deposit sediments of different sizes.
- Beach gradient as the slope of the beach is determined by sediment size eg fine grain size result in beaches of gentle gradient.
- Observe angularity/roundness of sediment to deduce the rate of erosion.

Any 2 @ 1m each

- b The students extended their study to the nearby coastal town, popular with locals and tourists to answer the guiding question "What are the economic impacts of tourism?"
One group of students devised a questionnaire as shown in Fig. 1 and conducted a pilot survey while another group conducted a land use survey along the main street of the town.

Questionnaire

Hello, may I ask you a few questions?

- Are you a tourist? Yes () No ()
- What is your average monthly income? _____
- What is your main purpose here?

Beach activities
Food
Shopping
Sight seeing

- Which country are you from? _____

Thank you and have a nice day.

Fig. 1

- (i) The teacher gave negative feedback on the questionnaire shown in Fig. 1. Suggest 3 weaknesses in the questionnaire. [3]

- Introduction does not provide any context to the questionnaire.
- Q 2 is too sensitive and may cause the respondent to answer falsely.
- Q 3 should include an option "others".
- Q 3 is too vague to be of use in answering the economic impacts of tourism/No open ended question to catch more depth in response/open ended questions lead to difficulties in analysing/collating results.
- Order of questions eg Q 4 logically follows after Q 1.
- Doubtful about usefulness of Q 4 in answering guiding question.

- (ii) Explain the usefulness of a pilot survey. [2]

- Test out suitability of questionnaires so that refinement can be made to reduce wastage of time for ineffective questions.
- Test out suitability of fieldwork methodology so that changes can be made if needed.
- Able to understand existing conditions in the field eg traffic flow so that students' safety will not be compromised.

Any 2 @ 1m each

- (iii) Describe the use of land use survey and comment on its reliability to determine the economic impacts of tourism on the town. [5]

Describe (any 2 points @ 1m each)

- Select a site eg along the main part/road of the town popular with tourist.
- Obtain a base map and plot on the base map with the agreed symbols by walking on both sides of the road.
- Pre-determined the symbols for the base map plotting eg key for services that cater to tourists such food outlets, tourist accommodation, souvenir shops, toilets, money changers, tourist information etc

Comment (1m reliable, 1m unreliable and the last mark either)

- Reliable as the greater the land use for tourists, the higher the economic impact.
- However actual sales by tourists might not be known unless shop owners are willing to inform students.
- Students might not know how much of the services are used by tourists or by locals.
- One stretch of the main street might not be representative of the whole town.

Section B

Answer one question from this section.

2. (a) Study the map extract, which shows the coastal area around Whitby. The scale of the map is 1: 25 000.

- State the bearing of the Heritage Centre (grid square 9010) from the Church with tower (grid square 8910). [1]
- Contrast the coastal area to the west of Whitby with the coastal area to the east of Whitley. [3]

- 120° [1m]
- Coastal features: Presence of beaches on the West while wave cut platforms/rock outcrops at the East
- Evenness: More even coastline on the West and more indented coastline on the East
- Processes: Dominant coastal process on the West is deposition while on the East is erosion
- Coastal management: presence of groynes as coastal management on the west coast while the lack of coastal management on the east led to a more uneven coastline
- Type of land use at the coast: western coastline more urbanised eg West Cliff while eastern coastline more rural with farms eg Stoupe Cross Farm

Any 3 @ 1m each

- (b) Study Photograph A (Insert), which shows some coastal landforms. Identify landform A and with the help of labelled diagram(s), describe the processes leading to its formation. [5]

- Coastal landform: Stack
- Waves attack lines of weakness/less resistant parts by hydraulic action and abrasion at the base of the headland to form notch/cave
- Caves may develop on each side of the headland and continuous erosion eventually join the caves together, leaving a bridge of rock known as an arch above the opening
- Further erosion will cause the arch to collapse leaving the headland on one side and a tall column of rock known as a stack on the other
- 1m diagram

- (c) Study Fig. 2 (Insert), which shows Coral At Risk in Asia-Pacific.

- (i) Use Fig. 2 to describe the location and account for corals at risk at the critical level. [6]

Describe (any 3 regions @ 1m each)

- Along western coastline of India, southern Sri Lanka

- Coastline of Vietnam, Gulf of Thailand, North east of Peninsular Malaysia, northern tip of Borneo and a cluster in the Philippines
- Southern Japan and Taiwan
- Indonesian islands of Java, Bali and Sulawesi. Papua New Guinea and Solomon islands in the Pacific Ocean

Explain (3m)

- Bleaching occurs when higher sea temperature result in loss of algae causing corals to turn white/bleach
- Global Warming results in rise in sea levels faster than the ability of corals to adjust threatening their survival
- Pollution from fertilizers/untreated industrial waste/urban sewage cause water to become murky preventing sunlight from reaching the coral polyps

- (ii) Suggest how such threats to corals will pose difficulties to the people living near them. [2]

- Loss in tourist revenue as the damaged coral reefs are no longer an attraction
- Drop in marine lives and so affect the local fishing industry consequently increase in seafood prices for consumers

Accept plausible answer

- (d) "Soft engineering measures are more appropriate to prevent coastal erosion for the Less Developed Countries."
How far do you agree? Use examples to support your answer. [8]

Level 1 [0-3]

At this level, answers will be generalised or with minimal support if any given at all. Reasoning rather weak and expression may be unclear. A basic answer that has little development. Agreement or disagreement is sketchy. Answer lacks evidence.

Level 2 [4-6]

At this level, agreement or disagreement will be supported by appropriate detail but support is patchy so that the answer is not full. Good reasoning and logic in parts of the answer with good expression in places. Some evaluation of coastal measures discussed. Some evidence will be presented to support answers in at least one place in the answer.

Level 3 [7-8]

At this level, answers will be comprehensive and supported by sound knowledge. Both agreement and disagreement are considered and well supported. Reasoning is clear and logical with good expression of language. Detailed evaluation of coastal measures discussed. Evidence to support answer will be extensive. A clear criteria to address the word "more appropriate".

3. (a) Study Photograph B (Insert), which shows a building as part of the heritage of a country. [4]
(i) Describe features of the building which reflect the country's cultural heritage.

- 3 storey house
- Main entrance with figuring decorated pillars/metal gate
- A long tiled walkway from gate to main entrance of the house
- Chinese characters above main entrance into the house
- Wooden full length windows with carvings
- Intricate decorations of colourful animal/mythical figures/geometric shapes

Any 4 @ 1m each
Accept plausible answer

- (ii) Explain the importance of preserving buildings and heritage sites for tourism. [4]

- Reinforce national identity for domestic tourism
- Promote a country's identity, culture and history to international tourists
- Heritage sites contribute to the quality of life and cultural identity of local communities. Many heritage places are the focal point for community gatherings eg churches and temples.
- Heritage sites assist local economies through tourist related activities.

- (b) Study Fig. 3A and Fig. 3B (Insert), which show MICE (Meetings, Incentives, Conferences and Exhibitions) travellers and a write up about MICE in Indonesia respectively.

Use Fig. 3A to describe the trends for MICE travellers and Fig. 3B to explain how the Indonesian government can further develop the country as a MICE destination.

Describe (3m)

- Stagnated/very small increase of 1.34% to 1.63% between 2005 to 2007 [6]
- Steep increase (almost double) to 3.06% in 2008 and thereafter very small increase/stagnated between 3.06 to 3.29%
- Sharp drop in 2012 to 2.10% when total tourist arrivals to Indonesia increased

Explain (any 3 @ 1m each)

- Develop infrastructure such as large convention/exhibition halls equip with state of the art IT equipment and telecommunication facilities etc
- Good connectivity such as more international airports in other parts of Indonesia for incoming businessmen from different parts of the world/Internal connectivity in the form of roads & expressways between airports and hotels/convention venues
- Stable and efficient government that is free from corruption/bureaucracy to speed up development plans especially outside of Jakarta

- Quality service standards from staff at various levels from airport to hotels, restaurants, shopping malls etc that are used by businessmen

(c) Study photograph C, which shows an ecotourism destination.

With the help of photograph C, explain how ecotourism is sustainable.

[3]

- Ecotourism is set in undisturbed natural areas that conserves the environment such as a game reserve/national park
- There will be efforts to reduce carbon footprints eg hiking/walking instead of vehicles
- Eco tourist sites allow tourists to view animals from a distance in their natural setting with minimal impacts on wild life
- Ecotourism provides employment to the locals eg tribal people who serve as guides
- Tourist numbers are kept small to reduce impacts on the host country

Any 3 points @ 1m each

(d) "Developments in technology is more important than demand factors in leading to the rapid growth in global tourism."

How far do you agree? Use examples to support your answer.

[8]

Level 1 [0-3]

At this level, answers will be generalised or with minimal support if any given at all. Reasoning rather weak and expression may be unclear. A basic answer that has little development. Agreement or disagreement is sketchy. Answer lacks evidence.

Level 2 [4-6]

At this level, agreement or disagreement will be supported by appropriate detail but support is patchy so that the answer is not full. Good reasoning and logic in parts of the answer with good expression in places. Some evaluation of developments in technology and demand factors. Some evidence will be presented to support answers in at least one place in the answer.

Level 3 [7-8]

At this level, answers will be comprehensive and supported by sound knowledge. Both agreement and disagreement are considered and well supported. Reasoning is clear and logical with good expression of language. Detailed evaluation of developments in technology and demand factors. Evidence to support answer will be extensive. A clear criteria to address which is more important.

Table of Specifications

Question Number	AO1 + AO2 Knowledge & Critical Understanding & Constructing Explanation	AO1 + AO3 Knowledge & Interpreting & Evaluation of Geographical Data
1ai	2	
ii		2
iii	4	
iv		2
v		3
vi		2
bi		3
ii	2	2
iii	3	2
Subtotal	11	14
2a		4
b	4	1
ci		6
cii		2
d	8	
Subtotal	12	13
3ai		4
ii	4	
b		6
c		3
d	8	
Subtotal	12	13
Grand Total	35	40



ZHONGHUA SECONDARY SCHOOL PRELIMINARY EXAMINATIONS 2016

COMBINED HUMANITIES

2204/02

Paper 2 Geography Elective

13 September 2016

Secondary Four Express / Secondary Five Normal (Academic)

1 hour 40 minutes

Additional Materials: Answer Paper 1:50 000 Port Antonio Survey Map Extract
 1 Insert

READ THESE INSTRUCTIONS FIRST

Write your index number, class and name on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.

Section A

Answer **one** question.

Section B

Answer **one** question.

Section C

Answer **one** question.

Write all answers on the writing paper provided.
Candidates should support their answers with the use of relevant examples.
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.
The Insert contains Figs. 2, 3 and 4 for Question 5 and Fig. 5 for Question 6.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [] at the end of each question or part question.

For Examiner's Use		
Section A	Q1 or 2	/13
Section B	Q3 or 4	/12
Section C	Q5 or 6	/25
Total		/50

This document consists of **10** printed pages

Section A

Answer **one** question from this section.

- 1 A group of students wanted to investigate if the wind patterns are influenced by the monsoons in Singapore. They took measurements of wind speed and direction over each day in January and July to investigate the guiding question “How are Singapore’s wind patterns influenced by the monsoons?”.

Wind speed and direction recorded

Date	Mean Speed (km/h)	Dominant Direction	Date	Mean Speed (km/h)	Dominant Direction
01-Jan	7.6	NE	01-Jul	8.2	SW
02-Jan	11.2	NNE	02-Jul	9.8	SW
03-Jan	8.7	NNE	03-Jul	13	SSW
04-Jan	8.4	NNE	04-Jul	9.5	SSW
05-Jan	8.6	NE	05-Jul	9.5	SW
06-Jan	7.6	N	06-Jul	13.8	SSW
07-Jan	5.9	E	07-Jul	12.1	SSW
08-Jan	6.3	NE	08-Jul	9.5	SW
09-Jan	6.7	NNE	09-Jul	6.4	S
10-Jan	8.4	NNE	10-Jul	8.9	SW
11-Jan	9	NE	11-Jul	11.1	SSW
12-Jan	11.9	NNE	12-Jul	14.7	SSW
13-Jan	13	NNE	13-Jul	13.1	SSW
14-Jan	12.9	NNE	14-Jul	9.9	SW
15-Jan	11.8	NNE	15-Jul	8.9	S
16-Jan	11.8	E	16-Jul	13.8	SSW
17-Jan	11.4	NE	17-Jul	14	SSW
18-Jan	13.3	NNE	18-Jul	17.3	SSW
19-Jan	14	NNE	19-Jul	14.5	SSW
20-Jan	15	NNE	20-Jul	14.8	SSW
21-Jan	13.3	NNE	21-Jul	14.5	SSW
22-Jan	15.5	NNE	22-Jul	15.4	SSW
23-Jan	14.4	NNE	23-Jul	13.6	SW
24-Jan	13.7	NNE	24-Jul	11.8	SSW
25-Jan	12.7	NE	25-Jul	11.7	SW
26-Jan	12.8	NE	26-Jul	9.9	SW
27-Jan	13.8	NNE	27-Jul	11.9	SSW
28-Jan	11.8	NNE	28-Jul	14.9	SSW
29-Jan	10	NE	29-Jul	17.2	SSW
30-Jan	11.1	NE	30-Jul	12.1	SSW
31-Jan	13.1	NNE	31-Jul	7.4	SW
Avg	11.2		Avg	12.0	

Table 1

- (a) Describe how the students may obtain the data shown in Table 1. [4]
- (b) Justify the students' choice of:
- measuring wind speed, and
 - conducting the investigation in the months of January and July. [2]
- (c) Describe and explain how the students may improve the data collection process for greater reliability. [4]
- (d) One of the students felt that there may be a relationship between air pressure gradient and wind speed. They collected the air pressure gradient and wind speed data three times each day over a period of one month. Describe how the students may test the hypothesis "The greater the air pressure gradient, the higher the wind speed" using the collected data on **one** graph. [3]

- 2 A group of students wanted to investigate the historical district of Kampong Glam in Singapore where the main attractions have been the Sultan Mosque, the shops and the food and beverage outlets in the district. They wanted to know if changing land-use in the district will have an influence on the number of visitors to different parts of the district. Fig. 1 shows a map of the historical district and some amenities in its immediate vicinity. The students divided the area into four areas, with the exact location of the pedestrian count survey site indicated with star symbols. They conducted the survey in one day, with the results of their investigation as shown in Table 2.

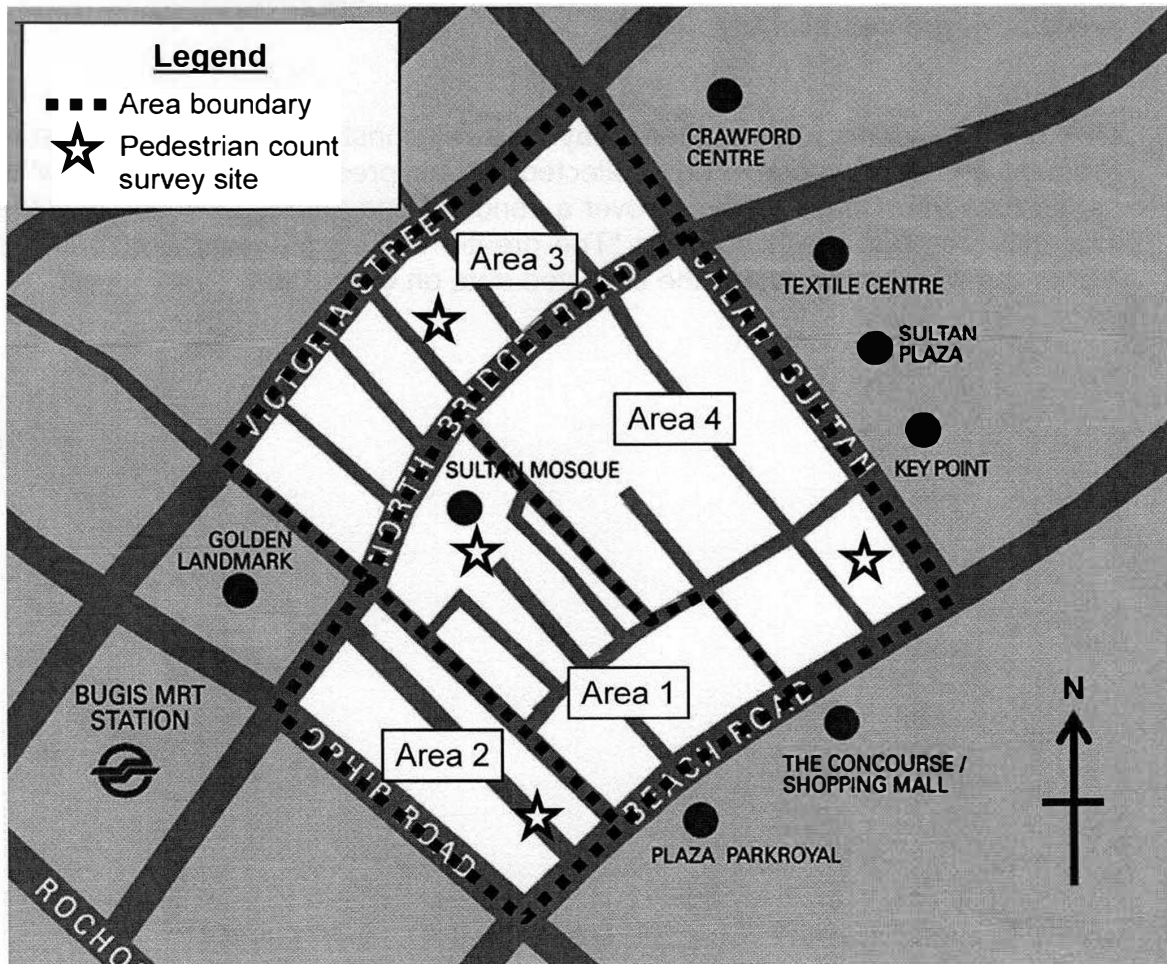


Fig. 1

Land-use Survey and Pedestrian Count at Kampong Glam

Area	1	2	3	4
Land-use Survey				
Shops	32	56	47	23
Eateries / F&B	29	12	15	6
Hotels / Residential	2	0	19	18
Other uses	1	2	9	8
Pedestrian Count				
Tally Count	203	143	92	54

Table 2

(a) Describe how the students may obtain the pedestrian count data. **[4]**

(b) The students believe there is an impact on pedestrian count caused by the increasing proportion of shops and food and beverage outlets being converted into hotels or residential developments.

Use the data in Table 2 to justify the hypothesis “The higher the proportion of hotels or residential developments, the lower the pedestrian count”. **[2]**

(c) Name and describe a suitable method to represent the data shown in Table 2 on a map of the area such as the one shown in Fig. 1. **[3]**

(d) Describe and explain ways in which the data collection may be improved for greater reliability. **[4]**

Section B

Answer **one** question from this section.

- 3** **(a)** Describe the successes and limitations of the Kyoto Protocol to combat climate change. **[4]**
- (b)** “Latitude is the main factor influencing precipitation in an area.”
- How far do you agree with this statement? Support your answer with evidence. **[8]**
-
- 4** **(a)** Explain how natural factors can result in both a rise and fall in global temperatures. **[4]**
- (b)** “Eco-tourism will be less successful over time”
- How far do you agree with this statement? Support your answer with examples. **[8]**

Section C

Answer **one** question from this section.

- 5 (a)** Study the 1:50 000 Map Extract, which shows part of the island of Jamaica.

Describe the distribution of agricultural activities in the part of the map south of northing 66. **[4]**

- (b)** Study Fig. 2 (Insert), which shows the disposable income and food consumption expenditure of urban households in Shanghai, China on a per capita basis in Renminbi (RMB) between 2009 and 2014.

Compare and account for the trends of disposable income and food consumption expenditure between 2009 and 2014 as shown in Fig. 2. **[4]**

- (c)** Study Fig. 3 (Insert), which shows the distribution of major oceanic trenches around the world.

Describe the distribution of major oceanic trenches in the world as shown in Fig. 3. **[3]**

- (d)** Study Fig. 4 (Insert), which shows a close-up map of the Mariana Trench and its vicinity.

With reference to Figs. 3 and 4, and with the aid of well-labelled diagrams, explain how the Mariana Trench and associated features in its vicinity may be formed. **[6]**

- (e)** “The impact caused by tectonic activity on humans will be more serious in the future.”

How far do you agree with this statement? Support your answer with examples. **[8]**

- 6 (a)** Study the 1:50 000 Map Extract, which shows part of the island of Jamaica.

Explain the distribution of agricultural activities in the part of the map south of northing 65.

[4]

- (b)** Study Fig. 5 (Insert), which shows the ceremonial handover of 350 metric tonnes of rice under the ASEAN Plus Three Emergency Rice Reserve (APTERR) agreement in 2014.

With the help of Fig. 5, explain how the agreement helps the participating countries to achieve food security.

[4]

- (c) Study Fig. 6 and 7, which shows the top ten countries in the world in terms of production and consumption of organic food respectively in 2009.

Top ten countries with highest numbers of organic food producers in 2009

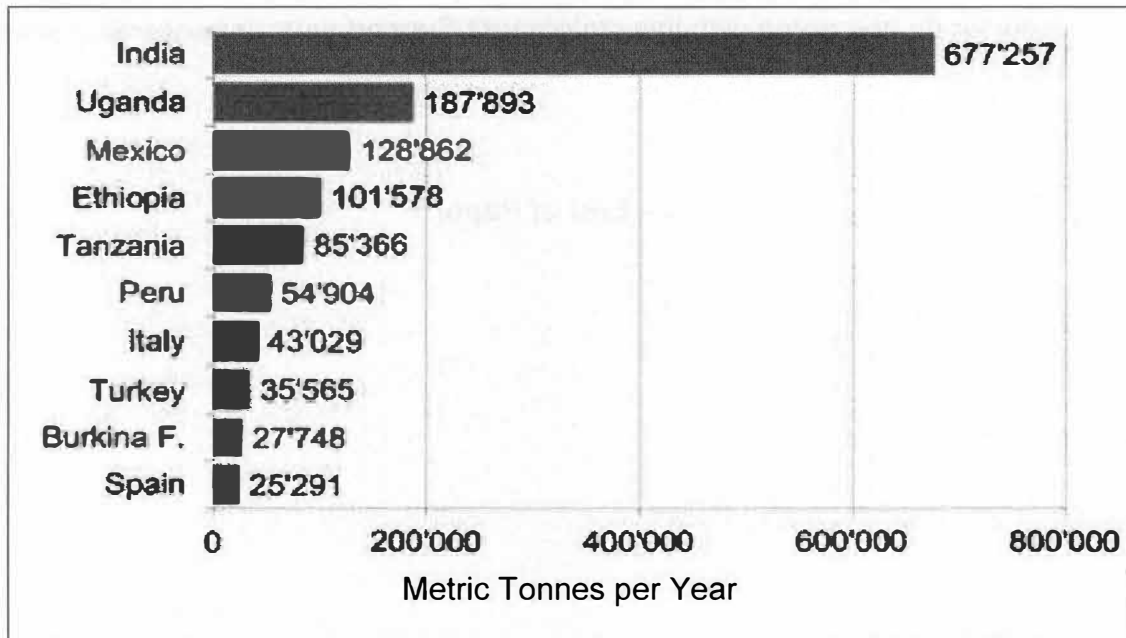


Fig. 6

Top ten countries with the highest per capita consumption of organic food in 2009

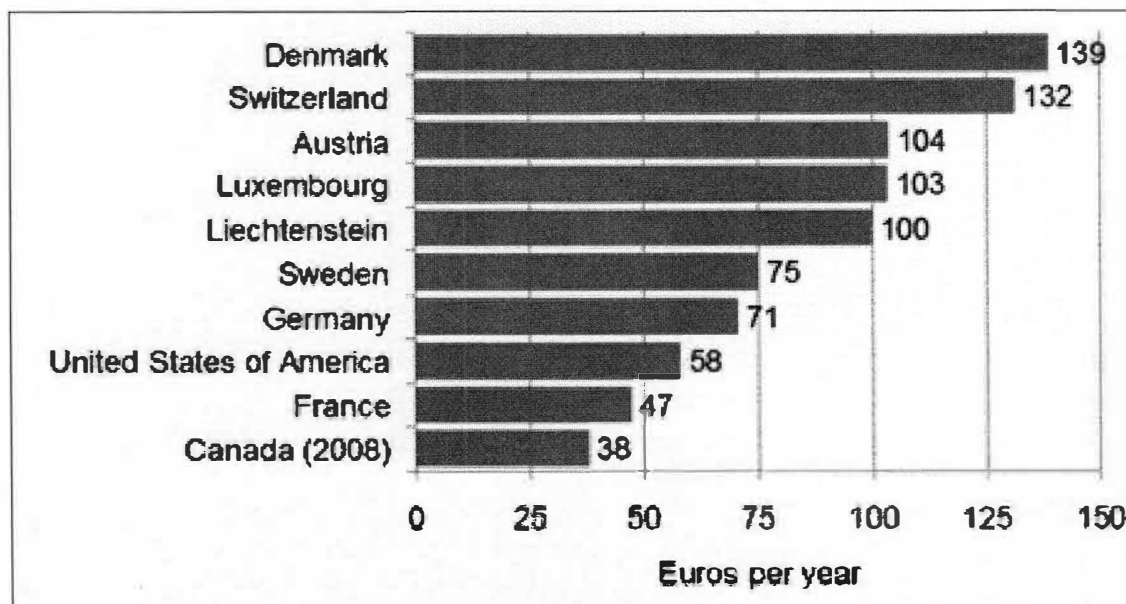


Fig. 7

Contrast between the production and consumption of organic food in the countries shown in Figs 6 and 7 and explain why this is so.

[5]

(d) Outline the social causes of food shortage around the world. **[4]**

(e) "Migration is the main social-cultural reason to explain changing food preferences around the world."

How far do you agree with this statement? Support your answer with examples. **[8]**

– End of Paper –



ZHONGHUA SECONDARY SCHOOL PRELIMINARY EXAMINATIONS 2016

COMBINED HUMANITIES

2204/02

Paper 2 Geography Elective

13 September 2016

Secondary 4 Express / Secondary 5 Normal (Academic)

INSERT

1 hour 40 minutes

READ THESE INSTRUCTIONS FIRST

The Insert contains Figs. 2, 3 and 4 for Question 5 and Fig. 5 for Question 6.

This document consists of **4** printed pages.

Fig. 2 for Question 5

Per capita disposable income and food consumption expenditure of urban households in Shanghai

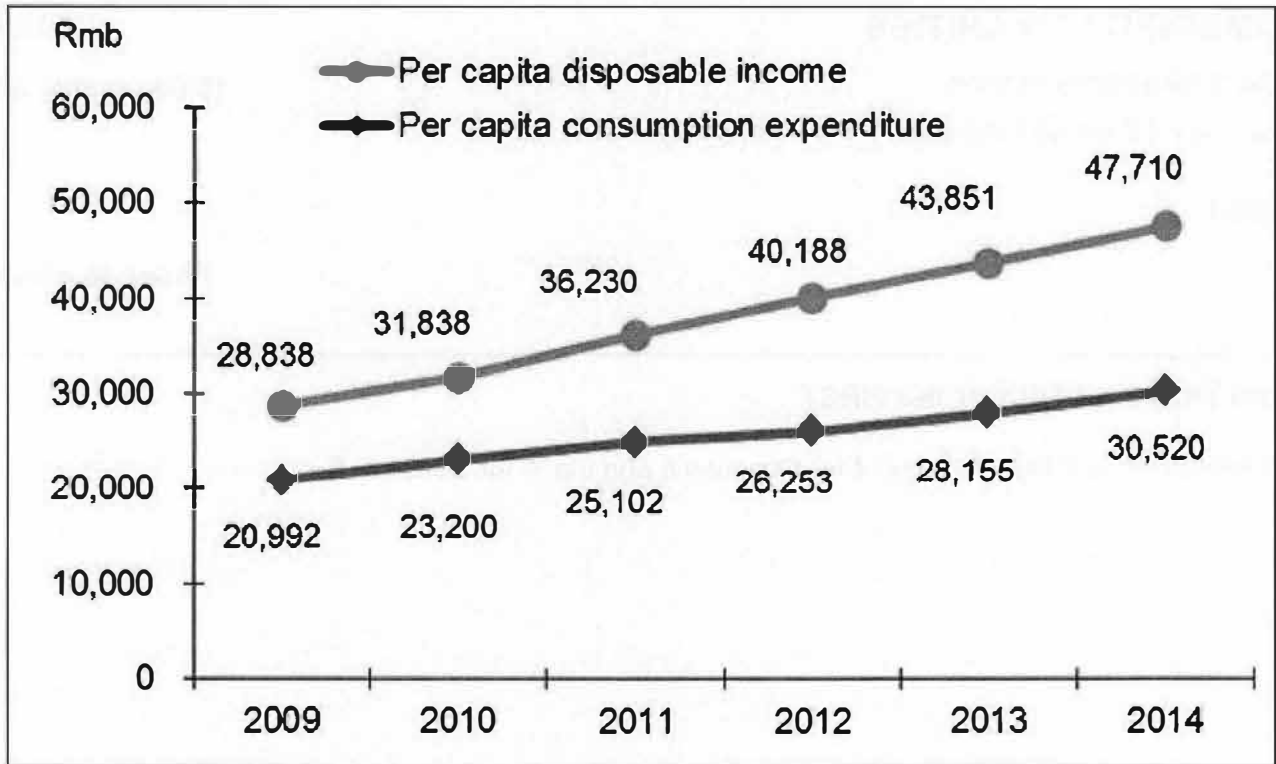


Fig. 3 for Question 5

Distribution of Major Oceanic Trenches in the World



Fig. 4 for Question 5

Map of Mariana Trench and Vicinity

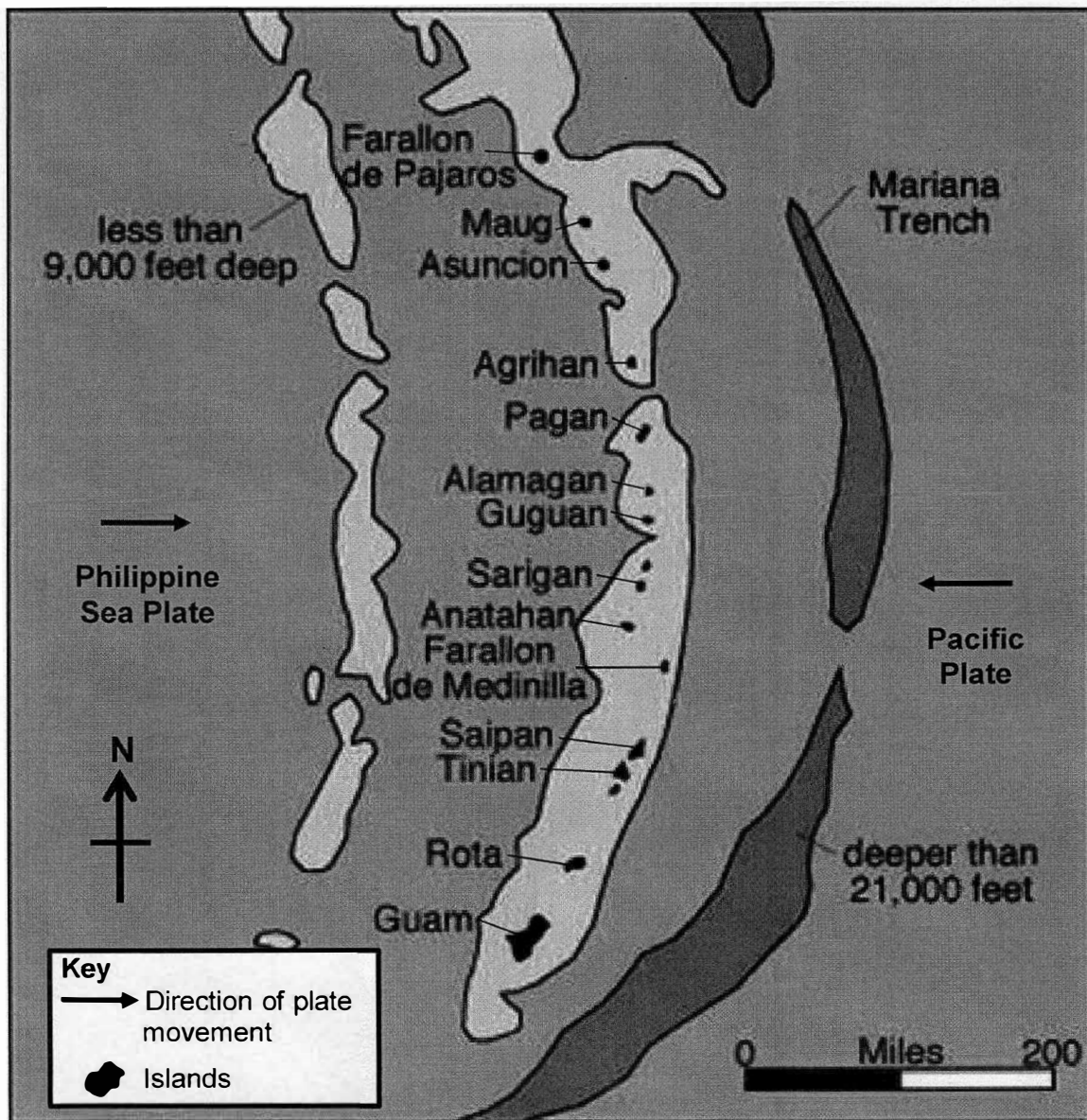


Fig. 5 for Question 6

Ceremonial Turn-Over of Donated Rice under the ASEAN Plus Three Emergency Rice Reserve (APTERR) Agreement in July 2014





ZHONGHUA SECONDARY SCHOOL PRELIMINARY EXAMINATIONS 2016

COMBINED HUMANITIES

2204/02

Paper 2 Geography Elective

13 September 2016

Secondary 4 Express / Secondary 5 Normal (Academic)

1 hour 40 minutes

ANSWER SCHEME

Section A

Answer one question from this section.

- 1 A group of students wanted to investigate if the wind patterns are influenced by the monsoons in Singapore. They took measurements of wind speed and direction over each day in January and July to investigate the guiding question "How are Singapore's wind patterns influenced by the monsoons?".

- (a) Describe how the students may obtain the data shown in Table 1. [4]

- Place the wind vane and anemometer where the wind is blowing directly at them.
- Hold the instruments away and slightly above the head for 3 seconds. Ensure it is not obstructed.
- Record the direction the wind vane points towards. This is where the wind is blowing from.
- Read the wind speed off the display on the anemometer.
- Take two readings each day over 31 days in January and 31 days in July.

[Accept up to four marks]

- (b) Justify the students' choice of: [2]
- measuring wind speed, and
 - conducting the investigation in the months of January and July.

Wind speed

- Wind speed is typically higher during the monsoon months, hence it is measured to check if the winds are indeed influenced by the monsoons.

Choice of months

- The months of January and July are likely to be chosen due to the higher possibility of the wind patterns being influenced by the northeast and southwest monsoons respectively.

- (c) Describe and explain how the students may improve the data collection process for greater reliability. [4]

Describe	Explain
Conduct the data collection over the entire year / take readings for every month of the year.	By checking if there is any significant dominant wind pattern in the other months, the students can then confirm that the wind patterns in January and July are influenced only by the monsoons.

2

Refer to secondary data	Helps to provide a more complete picture of the entire year's wind pattern, or that of an even longer duration (eg: over many years).
-------------------------	---

[2 marks for each successful description-explanation pair, up to two pairs.]

- (d) One of the students felt that there may be a relationship between air pressure gradient and wind speed. They collected the air pressure gradient and wind speed data three times each day over a period of one month. Describe how the students may test the hypothesis "The greater the air pressure gradient, the higher the wind speed" using the collected data on one graph. [3]

- Plot the data on a scattergraph.
- The air pressure gradient is on the x-axis and the wind speed is on the y-axis.
- Plot the points and draw a line of best fit to establish the relationship between the two variables.

- 2 A group of students wanted to investigate the historical district of Kampong Glam in Singapore where the main attractions have been the Sultan Mosque, the shops and the food and beverage outlets in the district. They wanted to know if changing land-use in the district will have an influence on the number of visitors to different parts of the district. Fig. 1 shows a map of the historical district and some amenities in its immediate vicinity. The students divided the area into four areas, with the exact location of the pedestrian count survey indicated with star symbols. They conducted the survey in one day, with the results of their investigation as shown in Table 2.

- (a) Describe how the students may obtain the pedestrian count data. [4]
- Find a safe location at the survey site.
 - Use a Tally counter or traditional tallying method on a recording sheet.
 - Carry out the survey for 10 minutes by counting every pedestrian which passes by.
 - Repeat the survey for at least three times at each area and take the average figure.
 - Record the exact location, date and time for data presentation and making comparisons later.
- [Accept up to four marks]
- (b) The students believe there is an impact on pedestrian count caused by the increasing proportion of shops and food and beverage outlets being converted into hotels or residential developments.

Use the data in Table 2 to justify the hypothesis "The higher the proportion of hotels or residential developments, the lower the pedestrian count". [2]

- When converted to percentages, Area 4, which has the highest ratio of 32.73% of hotels/residential, also has the lowest footfall of 54, while Area 2, which has no hotels or residential developments had the second highest pedestrian count of 143.

OR

- Site 1, which has a low ratio of hotels or residential developments (3.13%) has the highest pedestrian count of 203.
- Hence, it is likely that the conversion to hotels/residential reduces the pedestrian count since most tourists will not be walking around areas with the least number of attractions such as the mosque, shops or the F&B outlets.

- (c) Name and describe a suitable method to represent the data shown in Table 2 on a map of the area such as the one shown in Fig. 1. [3]
- Proportionate circles with pie charts on Fig. 1.
 - Plot one circle each, with its centre corresponding with the approximate centres of each survey area / with each circle within their respective areas.
 - The sizes of the circles are scaled by the pedestrian count in each of the areas respectively.
 - The pie charts shows the proportion of land-use type in each area.
- [Accept up to three marks]
- (d) Describe and explain ways in which the data collection may be improved for greater reliability. [4]

Issue	Describe	Explain
Location	Choose locations where the pedestrians should preferable come from not more than three directions (eg: avoid standing at a junction)	Decrease the likelihood of failing to account for pedestrians when there is high pedestrian flow.
	Avoid locations which are too near high-flow amenities which are outside the study area	as they may be influenced by the amenities nearby, such as the MRT and the shopping mall
Profile	There should be differentiation between tourists and locals	as the locals may go to Kampong Glam with different agendas or they may actually be going to nearby establishments such as the mall
Time / frequency	The frequency of the survey can be increased to cover more days for at least thrice each day.	so as to reduce influence from other factors such as weather
	Conduct the survey at the same time each day.	To ensure comparability between days to rule out other potential influences to pedestrian count

[2 marks for each successful description-explanation pair, up to two pairs. Up to 2 marks to be awarded for each issue]

Section B

Answer one question from this section.

- 3 (a) Describe the successes and limitations of the Kyoto Protocol to combat climate change. [4]

Successes [At least 1 point, maximum 3 points]

- Many countries (eg: Austria, Finland, Greece, Ireland and Spain) met or exceeded the targets set.
- Countries were required to monitor and report greenhouse gas emissions, so this helped ensure targets are met.
- It encouraged sustainable development in LDCs with the aid of DCs. The Clean Development Mechanism (CDM) gave Certified Emission Reduction (CER) credits to countries which carried out emission-reduction projects (e.g. installing energy-efficient infrastructure) in LDCs. Each credit is equivalent to one tonne of carbon dioxide, which is used to offset the amount produced in the assisting country.

Limitations [At least 1 point, maximum 3 points]

- Some countries (eg: Denmark, Sweden and UK) did not achieve their targets.
- Kyoto Protocol does not make it compulsory for low greenhouse gas emission countries to help those with higher emissions. Hence, countries with high greenhouse gas emissions may not be able to achieve their emissions targets as easily.
- The CDM was blamed for disrupting local communities in LDCs (eg: Dams in China).
- Countries contributing the most greenhouse gases did not participate (eg: USA) or had no binding targets (eg: China, India, Indonesia, Brazil, Japan, Congo), hence the global impact was limited. Since 1997, global emissions have instead increased by 35% (mainly from China, India & USA).

- (b) "Latitude is the main factor influencing precipitation in an area." How far do you agree with this statement? Support your answer with evidence. [8]

Level 1 (0-3 marks)

At this level answers will be generalised or with minimal support if any stand were given at all. Reasoning rather weak and expression may be unclear. A basic answer that has little development.

Level 2 (4-6 marks)

Agreement or disagreement will be supported by appropriate details. Or, both agreement and disagreement are considered, but support is patchy so that the answer is not full. Good reasoning and logic in parts of the answer with good expression in places.

Level 3 (7-8 marks)

At this level answers will be comprehensive and supported by sound knowledge. Both agreement and disagreement are considered and well supported. Reasoning is clear and logical with good expression of language. A clear indication will be given in providing reasoning in why latitude may or may not be the main factor influencing precipitation in an area.

Suggested Answer Outline

Agree: Latitude influences temperature, which results in more convectional rainfall to occur in Singapore. The high amount of vegetation in the region also helps to contribute to evaporation, and thus need not rely solely on water bodies.

Disagree: Evaporation will be less likely if there are few water bodies nearby. This is demonstrated by the lower levels of precipitation in Central Africa despite similar latitude as Singapore. Only with high evaporation, will there be high rainfall to support huge amounts of plant growth, which in turn results in more evaporation, and the cycle continues.

Conclusion: Disagree, as both factors are just as important in the formation of rain, with the latter being the source of water, and the former being the driving force to allow precipitation to take place.

- 4 (a) Explain how natural factors can result in both a rise and fall in global temperatures. [4]

- Sunspot activity goes through cycles lasting 11 years, peaking in the middle of each cycle.
- This results in more solar radiation reaching earth, causing higher temperatures during the peak periods, while lower temperatures in other years where the sunspot activity is less active.
- Volcanic eruptions spew large amounts of material such as carbon dioxide, sulphur dioxide, ash and dust into the atmosphere.
- This can reflect solar energy back into space, which results in global dimming, where the world's temperature cools down for months or years.

- (b) "Eco-tourism will be less successful over time" How far do you agree with this statement? Support your answer with examples. [8]

Level 1 (0-3 marks)

At this level answers will be generalised or with minimal support if any stand were given at all. Reasoning rather weak and expression may be unclear. A basic answer that has little development.

Level 2 (4-6 marks)

Agreement or disagreement will be supported by appropriate details. Or, both agreement and disagreement are considered, but support is patchy so that the answer is not full. Good reasoning and logic in parts of the answer with good expression in places.

Level 3 (7-8 marks)

At this level answers will be comprehensive and supported by sound knowledge. Both agreement and disagreement are considered and well supported. Reasoning is clear and logical with good expression of language. A clear indication will be given in providing reasoning in why Eco-tourism may or may not be less successful over time.

Suggested Answer Outline

Agree: once it becomes popular, it becomes increasingly difficult to control

numbers. The number of secluded sites also becomes limited over time.

Disagree: it is in the long-term interests for all stake-holders to ensure it works, without which, the industry will be increasingly impacted negatively in the long-term.

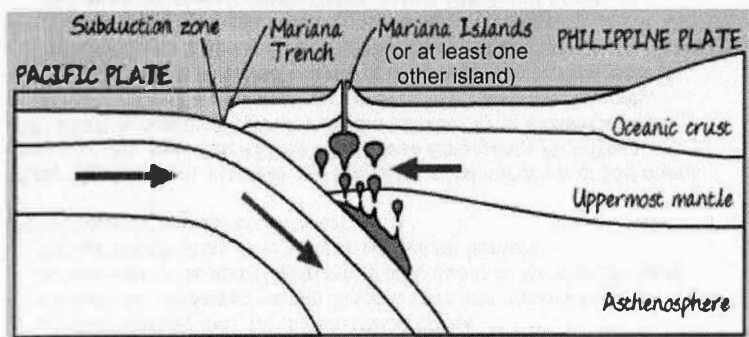
Section C

Answer one question from this section.

- 5 (a) Study the 1:50 000 Map Extract, which shows part of the island of Jamaica. Describe the distribution of agricultural activities in the part of the map south of northing 66. [4]
- Most of the agricultural areas are found at lower altitudes below 200 metres / flatter land along the River Grande where the contour lines are spaced further apart.
 - The banana plantations tend to be found on the western bank of River Grande north of northing 63, and to the eastern bank south of northing 63.
 - Mixed or scattered cultivations occupy most of the areas east of the Class C road as well as a cluster in grid square 0264.
 - There is a small cluster of pasture north of Stanton Harcourt.
 - Agricultural land is generally not found to the west of the area, which is dominated by woodland, trees and scrub instead.
- [Accept any four points]
- (b) Study Fig. 2 (Insert), which shows the disposable income and food consumption expenditure of urban households in Shanghai, China on a per capita basis in Renminbi (RMB) between 2009 and 2014. Compare and account for the trends of disposable income and food consumption expenditure between 2009 and 2014 as shown in Fig. 2. [4]
- Compare: Similarity* [Minimum 1 mark]
- Both disposable income and food consumption levels rose between 2009 and 2014, from between 28,838RMB to 47,710RMB per capita and 20,992RMB to 30,520RMB per capita respectively.
- Compare: Differences* [Minimum 1 mark]
- However, the share of disposable income used for food consumption expenditure saw a drop in the same period, from about 73% in 2009 to about 64% in 2014.
- OR
- However, the growth in per capita consumption expenditure rises at a slower pace compared to the growth in per capita disposable income, with an increase of 9,528RMB in the former and 18,872RMB in the later.
- Account* [Minimum 2 marks]
- This is because as income levels rise, people have higher purchasing power, and hence spend more absolute amounts on food, especially more expensive food such as meat and fruits.
 - However, the share of disposal income expenditure on food tends to drop when the former rises, because with rising income, people's food consumption are more likely to be met, and hence there is less need to spend more of it on food.
- OR
- People with higher incomes also tend to become more sophisticated, and hence tend to desire for consumption of other goods and services which will more likely raise their living standards.
- [Accept other plausible answers]

- (c) Study Fig. 3 (Insert), which shows the distribution of major oceanic trenches around the world. Describe the distribution of major oceanic trenches in the world as shown in Fig. 3. [3]
- Most of them tend to be found at the edge of oceans / off the coasts of continents.
 - The largest cluster is found around the Pacific Ocean / along the Pacific Ring of Fire.
 - Some of these trenches are found further away from the land masses, such as the Mariana Trench and the Tonga Trench.
- OR
- There are very few trenches in the other oceans, such as the Java Trench in the Indian Ocean and the South Sandwich Trench in the Atlantic Ocean.
- [Accept other plausible answers]

- (d) Study Fig. 4 (Insert), which shows a close-up map of the Mariana Trench and its vicinity. With reference to Figs. 3 and 4, and with the aid of well-labelled diagrams, explain how the Mariana Trench and associated features in its vicinity may be formed. [6]
- The Mariana trench is formed when two oceanic plates, namely the Philippines and Pacific Plates, converge.
 - The Pacific Plate subducts beneath the Philippines Plate as it is denser, and hence forms the Mariana Trench at the subduction zone.
 - The subducted material melts in the asthenosphere/mantle and eventually rises to the surface as undersea volcanoes.
 - As the undersea volcanoes build up layer by layer over time with each eruption, they emerge above the surface of the ocean to form an Island Arc such as the Mariana Islands (or name at least one other Island from Fig. 4).



[Up to 2 marks for a complete well-labelled diagram]

- (e) "The impact caused by tectonic activity on humans will be more serious in the future." How far do you agree with this statement? Support your answer with examples. [8]

Level 1 (0-3 marks)

At this level answers will be generalised or with minimal support if any stand were given at all. Reasoning rather weak and expression may be unclear. A basic answer that has little development.

Level 2 (4-6 marks)

Agreement or disagreement will be supported by appropriate details. Or, both agreement and disagreement are considered, but support is patchy so that the answer is not full. Good reasoning and logic in parts of the answer with good expression in places.

Level 3 (7-8 marks)

At this level answers will be comprehensive and supported by sound knowledge. Both agreement and disagreement are considered and well supported. Reasoning is clear and logical with good expression of language. A clear indication will be given in providing reasoning in why the impact caused by tectonic activity on humans will or will not be more serious in the future.

Suggested Answer Outline

Agree: Impact has increased in recent decades in terms of casualty rates and the economic costs of recovery. This may be caused by factors such as rising populations in general, higher urbanisation in vulnerable cities with more high-rise buildings, urban development involving increasingly sophisticated but expensive infrastructure and housing, continued apathy towards mitigation or contingency plans due to higher trust in anti-quake technology. Continued poor governance in some LDCs has seen continued inability to handle quakes well, such as in Haiti. Even DCs like Japan are not spared from high casualty rates since quakes and tsunamis can overwhelm existing measures such as seawalls.

Disagree: However, casualty rates in some recent earthquakes has been much smaller, especially in DCs such as New Zealand. LDCs such as China has also learned from their mistakes and are better prepared in more recent quakes. With increase in development and rising incomes, more and more countries are able to implement mitigation measures such as reinforced existing buildings and infrastructure, earthquake monitoring and tsunami early-warning systems, etc. Improvements in technology has seen better-designed buildings and infrastructure to withstand quakes. Rising education levels has also reduced the likelihood of people adopting a fatalistic response. Governments also generally gain experience to reduce impacts of quakes as time progresses.

Conclusion: While the economic costs will very likely continue to rise due to inevitable human development, there is cause for optimism that human casualty rates can be reduced if all parties play their part responsibly despite the rise in populations and urbanisation.

- 6 (a) Study the 1:50 000 Map Extract, which shows part of the island of Jamaica. Explain the distribution of agricultural activities in the part of the map south of northing 65. [4]
- Most of the agricultural activities are near the River Grande, likely due to greater fertility / access to irrigation.
 - Tend to be found on flatter land where the contour lines are spaced further apart, which is easier to farm / where machinery can be more easily used.
 - They are near settlements such as Windsor, Newington and Stanton Court, where the farm workers may reside in / where they can market their produce / where they can process their goods.
 - Found near roads such as the Class C road and tracks/footpaths, which allows ease of accessibility to move their goods to the market / easy transportation of supplies / easier access for farmers.
- [Accept any other plausible answer]
- (b) Study Fig. 5 (Insert), which shows the ceremonial handover of 350 metric tonnes of rice under the ASEAN Plus Three Emergency Rice Reserve (APTERR) agreement in 2014. With the help of Fig. 5, explain how the agreement helps the participating countries to achieve food security. [4]
- Food security is achieved when a country is able to provide food of sufficient quantity and with acceptable quality at any time that it is required.
 - The APTERR agreement was signed amongst member states of ASEAN and three countries, namely China, Japan and South Korea.
 - Each of the countries would contribute donations of rice or its monetary equivalent to a rice reserve, with the three largest countries outside ASEAN providing bigger contributions to support the grouping.
 - During times of disaster or emergencies, rice reserves will be provided to countries who signed the agreement to ensure continued supply of rice, such as Malaysia donating rice to the Philippines in this case.
 - In addition, member countries assist others through technological transfer and education to help intensify food production to reduce dependence on imports and increase rice supply security, such as Thailand's assistance to Cambodia since 2012.
- [Accept up to four points]
- (c) Study Fig. 6 and 7, which shows the top ten countries in the world in terms of production and consumption of organic food respectively in 2009. Contrast between the production and consumption of organic food in the countries shown in Figs 6 and 7 and explain why this is so. [5]
- Contrast:* [Minimum 1 mark]
- The major producers of organic food are typically LDCs such as India and Uganda (except Italy and Spain), while the main consumers are typically DCs such as Denmark and Switzerland.
- Why mainly LDC producers:* [Maximum 2 mark]
- The producers are typically LDCs as they tend to be agriculturally-dependent economies.
 - The farmers there are keen to increase their incomes by farming food for export to meet external demand, hence they grow organic crops which are increasingly popular in the DCs.
 - DCs, on the other hand, often face higher production costs, which reduces their ability to compete with LDCs, and hence are less able to compete with

- countries like India.
- Why mainly DC consumers:* [Maximum 2 mark]
- The DCs tend to be the ones consuming most of the organic produce as they tend to have higher incomes, and thus can afford the more expensive organic food OR LDCs tend to have lower incomes, and hence lower purchasing power and less ability to buy relatively expensive organic food.
 - Their higher levels of education and economic development also means DC consumers tend to be more concerned about health and nutrition, and therefore prefer organic food for their perceived food safety and health benefits. OR LDCs tend to be more concerned about ensuring sufficient food to avoid malnutrition and/or starvation, hence food quality is often of less concern.
- [Accept other plausible answers up to 5 marks]
- (d) Outline the social causes of food shortage around the world. [4]
- Food shortage occurs when people have difficulty accessing food sources because they are too isolated and infrastructure is lacking to allow ease of accessibility.
 - Physical conditions such as steep terrain and severe environments can make it difficult to traverse, and hence makes it more difficult to distribute food to the people.
 - It also occurs when poor storage results in food going bad before they can reach the people who need them.
 - Rapid population growth especially in LDCs causes a sharp rise in demand for food, when the supply of food production could not keep up, thus causing food shortage.
- (e) "Migration is the main social-cultural reason to explain changing food preferences around the world." How far do you agree with this statement? Support your answer with examples. [8]
- Level 1 (0-3 marks)
At this level answers will be generalised or with minimal support if any stand were given at all. Reasoning rather weak and expression may be unclear. A basic answer that has little development.
- Level 2 (4-6 marks)
Agreement or disagreement will be supported by appropriate details. Or, both agreement and disagreement are considered, but support is patchy so that the answer is not full. Good reasoning and logic in parts of the answer with good expression in places.
- Level 3 (7-8 marks)
At this level answers will be comprehensive and supported by sound knowledge. Both agreement and disagreement are considered and well supported. Reasoning is clear and logical with good expression of language. A clear indication will be given in providing reasoning in why migration is or is not the main social-cultural reason to explain changing food preferences around the world.

Suggested Answer Outline

Migration, and at least two of the following:

- Religious beliefs
- Food preferences
- Population growth
- Changing diets

Table of Specifications

Question Number	AO 1 + AO 2 Knowledge + Critical Understanding & Constructing Explanation	AO 1 + AO 3 Knowledge + Interpreting & Evaluation of Geographical Data
1(a)		4 marks
1(b)		2 marks
1(c)	2 marks	2 marks
1(d)	3 marks	
Total	5 marks	8 marks
2(a)		4 marks
2(b)		2 marks
2(c)	1 mark	2 marks
2(d)	4 marks	
Total	5 marks	8 marks
3(a)	4 marks	
3(b)	8 marks	
Total	12 marks	0 marks
4(a)	4 marks	
4(b)	8 marks	
Total	12 marks	0 marks
5(a)		4 marks
5(b)		4 marks
5(c)		3 marks
5(d)		6 marks
5(e)	8 marks	
Total	8 marks	17 marks
6(a)		4 marks
6(b)		4 marks
6(c)		5 marks
6(d)		4 marks
6(e)	8 marks	
Total	8 marks	17 marks
Paper total	50 marks	50 marks