XINMIN SECONDARY SCHOOL
新民中学
SEKOLAH MENENGAH XINMIN
PRELIMINARY EXAMINATION 2024

CANDIDATE NAME						
CLASS	4	0		INDEX NO		

HUMANITIES – MARKING SCHEME

2260/02

Paper 2 Geography

21 August 2024

Secondary 4 Express

1 hour 45 minutes

Setter: Ms Heidi Tan
Vetter: Mr Thiruselvan

Candidates answer on the Question Paper.
Additional Materials: Insert

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

Answer **three** questions in total:
Section A
Answer Question 1 **and** Question 2.
Section B
Answer **either** Question 3 or Question 4.

The Insert contains additional resources referred to in the questions.

The number of marks is given in the brackets [ ] at the end of each question or part question.

Section A (Q1)	/14
Section A (Q2)	/18
Section B	/18
Total	/50

Parent's Signature	

Assessment Specification Grid

Question	Max Mark	Question Part	AO1	AO2	AO3
1	14	(a)(i)	2		
		(a)(ii)	3		
		(b)		3	
		(c)			6
		Total	**5**	**3**	**6**
2	18	(a)		3	
		(b)(i)		3	
		(b)(ii)		3	
		(c)			9
		Total	**0**	**9**	**9**
3	18	(a)(i)	3		
		(a)(ii)		4	
		(b)(i)		4	
		(b)(ii)	4		
		(c)	3		
		Total	**10**	**8**	**0**

**Question 4 omitted from count as it is a dummy question*

AO1: 5 + 0 + 10 = 15m
AO2: 3 + 9 + 8 = 20m
AO3: 6 + 9= 15m

AO 1 | Knowledge with Understanding
Candidates should be able to construct responses based on understanding of theories, generalisations, models and concepts This will be demonstrated by the ability to:

a) identify, describe or explain theories, generalisations, models, concepts and methods.
b) classify environments, events, methods, objects, people, processes and places into categories according to their common features.
c) explain how events, objects and processes cause changes to environments, people and places.

AO 2 | Skills and Analysis
Candidates should be able to apply their understanding to break down information into its component parts or to carry out an investigation. This will be demonstrated by the ability to:

a) support conclusions using relevant material from information provided.
b) identify, describe or compare characteristics, relationships, patterns and trends shown in graphs, maps, photographs, diagrams, tables and texts.
c) compare similarities and differences between environments, events, methods, objects, people, processes and places.
d) describe or explain how to collect, process, interpret and present quantitative and qualitative data.
e) adapt methods to manage risks, limitations and achieve investigation objectives.

AO 3 | Judgement and Decision-Making
Candidates should be able to use defined criteria and standards to evaluate methods, outcomes and proposals. This will be demonstrated by the ability to:

a) arrive at an overall evaluation by considering constraints and opportunities in the environment, people's varying needs, attitudes and beliefs, or the importance of sustainable development.
b) evaluate the reliability and validity of investigation findings.

Section A

Answer Question 1 **and** Question 2.

1 Cluster 1: Geography in Everyday Life

(a) Study Fig. 1.1, which shows macaques on the streets of Lopburi city, Thailand.

Macaques on the streets of Lopburi city, Thailand

Fig. 1.1

(i) With reference to Fig. 1.1, explain how local communities and wildlife can negatively affect each other.

Award 1 mark for each explanation of how local communities and nearby nature negatively affect each other, to a maximum of 2 marks.
Award a maximum of 1 mark if student only talks about a one-sided explanation (i.e. how local communities affect wildlife only, vice versa)
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

- The monkeys can be killed by the oncoming traffic / passing motor vehicles [1 mark].
  - The accident could cause disruption and delays to travel and people going to work [1 additional mark).
- Wildlife / monkeys might attack people in self-defense when they are provoked [1 mark].
  - During such attacks, both wildlife and locals/people may get injured [1 additional mark].

Marker's remarks:

- Largely well-done
- A handful of students went on to explain why there is more wildlife in urban areas which did not answer the question as the question was asking for the impact more wildlife in urban areas
- A handful of student answers were also one-sided i.e. only elaborated how wildlife affected humans and vice versa
- Some can be clearer and specific on the harm / negative impact caused – i.e. injured, harmed, noise pollution etc etc

AO1

……[2]

(ii) With reference to Fig. 1.1, suggest reasons for the increase in human-wildlife encounters.

Award 1 mark for each suggestion of why there is an increase in human-wildlife encounters, to a maximum of 3 marks.
Award a maximum of 1 additional mark for further development of each suggestion, where applicable.

- Due to urbanization and development, this results in the shrinking of forests, which are the natural habitats of wildlife. [1 mark]
- Hence, some wildlife venture out of the natural areas in search of food or shelter, into urban areas, increasing human-wildlife encounters. [1 mark]
- People's increased interest in the outdoor recreational activities like trekking can also lead to more time in nature, which can lead to increase human-wildlife encounters. [1 mark]
- The increased greening efforts by cities bring nature, like pocket parks, into urban areas, which can lead to more co-existence with nature and humans. [1 mark]

Marker's remarks:

- Focus of the student answers should be on reasons that explain why wildlife may venture into urban areas and vice versa.
  - Many students wrote about reasons that led to the increased population of wildlife in urban areas that led to increased interactions which was not answering the key idea about increased human-wildlife interactions

AO1

……[3]

(b) Study Fig. 1.2 (Insert), which shows two precincts in Tiong Bahru Neighbourhood, Singapore.

Using Fig. 1.2 (Insert), describe the differences between precinct 1 and precinct 2.

Award 1 mark for each description of each difference in layout between precincts 1 and 2, to a maximum of 3 marks.

Award a maximum of 1 additional mark for further development of each description, where applicable.
Award a maximum of 1 mark if no connecting word (e.g. while, whereas, but) are used. And no point-to-point comparison is used.

- Precinct 1 has smaller buildings / housing blocks while those in precinct 2 have larger buildings. [1 mark]
- Precinct 1 has buildings arranged in a short, linear pattern/ in rows, while those in precinct 2 are in clusters surrounding amenities. [1 mark]
- Precinct 1 has fewer amenities while precinct 2 has more amenities. [1 mark]
- Precinct 1 only has a food centre and a market, whereas precinct 2 has 2 medical centres, a community centre and many parking facilities. [1 mark MAX for examples]
- Precinct 1 is smaller in size compared to precinct 2. [1 mark]

Marker's remarks:

- Many students listed the number of amenities and went into the micro details. This time we gave a max of 1m for this. But do note that in national exams, this is given as an additional mark and will not be awarded if the main mark is not indicated.
- A few did not compare but described one precinct
- A handful of students also committed false match e.g. comparing amenities with size

AO2

..... [3]

(c) A group of Singapore students were investigating tourism in Gardens by the Bay. As part of their investigation, they wanted to find out the main reason why tourists visit Gardens by the Bay.

The students collected data through a closed-ended questionnaire, getting tourists to indicate their main reason(s) for their visit to Gardens by the Bay. They used convenience sampling to collect responses from 20 tourists over a weekend. The results of the questionnaire are shown in Table 1.1.

Table 1.1

Main reason(s) for tourists' visit to Gardens by the Bay

reason	no. of responses
flower dome	20
cloud forest	18
OCBC skywalk	8
supertree grove	11
bay east garden	4
children's garden	9
the canyon	1

With reference to Table 1.1, evaluate the validity of the students' findings regarding the main reason(s) for tourists' visit to Gardens by the Bay.

Award 1 mark for each evaluation of the validity of the students' findings, to a max of 6 marks.
Award a maximum of 1 additional mark for further development of each evaluation, where applicable.

Valid:

- The findings are valid as the data collected addresses the investigation question, highlighting the main reasons for tourists' visit to Gardens by the Bay. [1 mark]
    - From the data collected, it revealed that flower dome is the most popular reason for tourists' visit, with 20 responses. [1 additional mark]
- Primary data was collected by the students from tourists at the location. Primary data collected is recent and relevant. [1 mark]
- Convenience sampling method was used by the students, this method is a quick way to gather data needed especially since time is limited. [1 mark]
- Students collected data on a weekend, which increases the possibility of sampling more people as more people are likely to visit on the weekends. [1 mark]

Not valid:

- The findings may not be valid as only 20 visitors were sampled, this sample size is too small and may not be representative of the population. [1 mark]
- The findings may not be valid as the data was only collected over one weekend, which is too short a time period for data collection to make any definite conclusions. [1 mark]
- Convenience sampling method was used by the students, this method may result in biasness as respondents are selected at the convenience of the students and may not be representative of the population. [1 mark]

Marker's Remarks:

- Many did not state convenience sampling as having human bias but just vaguely stated that convenience sampling is unreliable
- Many students did not have the first point + additional point but went on straight to identifying areas that led to valid / invalid eg: sample size etc
- Many students also attempted to explain validity based on lack of info eg: students did not state when they collected data so they might have collected data over insufficient times etc
    - However, student answers should not be based on what was absent in the question but focus on what was described in the question
- Students should not provide suggestions but rather describe and explain the problem / issue that led to findings being valid / not valid
- Many stated that being able to select multiple reasons made the research more unrealiable however, this still allows us to identify the main reason therefore this point was not accepted.
- 401 especially: did not explain and rambled on eg: it was not valid as it was done over one weekend, it was not valid as it was using convenience sampling. It was not reliable and convenience sampling was not representative (Why not representative?) etc what was the issue with these?

AO3

…… [6]

2 Cluster 2: Tourism

(a) Study Fig. 2.1 (Insert), which shows the upgrades in route of the Hokuriku shinkansen in Japan.

With reference to Fig. 2.1, explain how the upgrades in the Hokuriku shinkansen route can enhance tourism in the region.

Award 1 mark for each explanation, to a maximum of 3 marks.
Award a maximum of 1 additional mark for further development of each description, where applicable.

- This increases the connections to more places (e.g. Komatsu, Kaga Onsen, Fukui), making these places more accessible. [1 mark]
    - As a result, attractions at Kago Onsen / Awara Onsen may become more popular at these areas as they become more easily accessible by train. [1 additional mark]
- People can get to these places in a shorter time using the shinkansen, rather than needing to change to the limited express trains, increasing convenience, enhancing tourism in the region. [1 mark]
- Reduce hassle to change lines as now people can just go directly Tsuruga without changing to limited express train. [1 mark]

Marker's remarks:

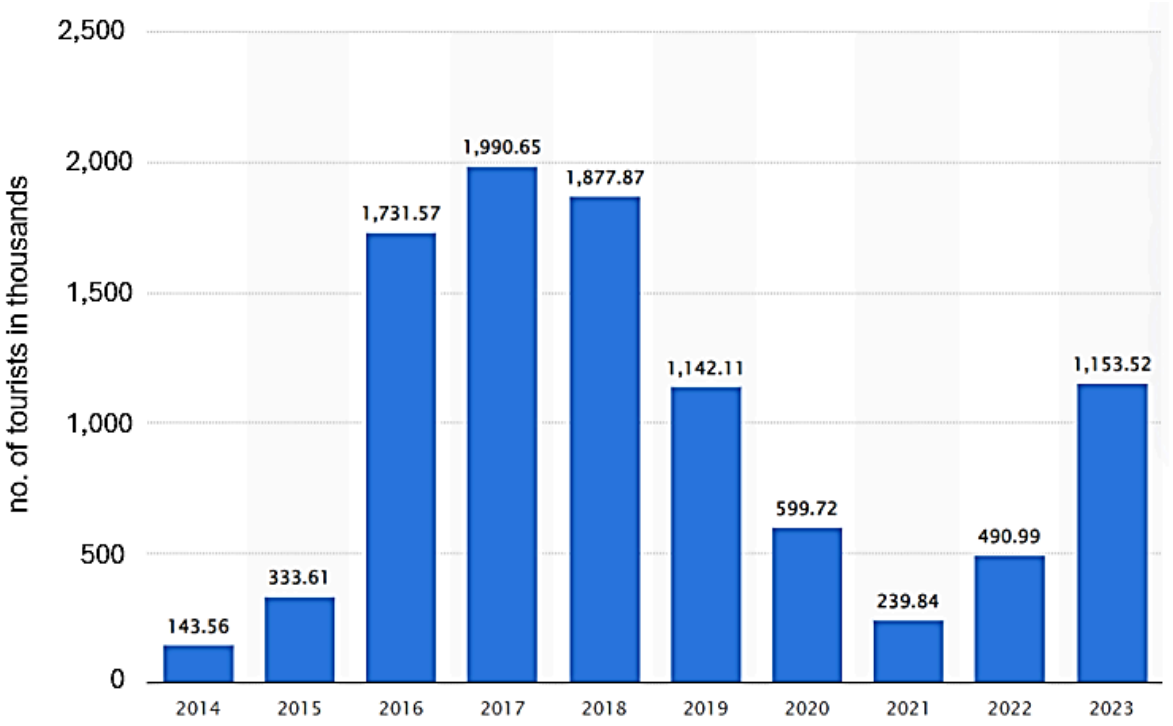
- Generally, most answers were able to highlight the increase in convenience.
- Better answers also extracted important information from the given source.
- Weaker answers tended to expand on a single idea of convenience because of more stations instead of varying their points for points such as: increased speed of travel due to shinkansen, greater variety in limited express train to Osaka and Nagoya etc.
- **When answering these questions candidates should keep an eye on every information to come up with varying points.**

AO2

…… [3]

(b) (i) Study Fig. 2.2, which shows a graph of the tourist arrivals to Phi Phi Islands National Park in Thailand from 2014 to 2023.

Tourist arrivals to Phi Phi Islands National Park from 2014 to 2023



Award a maximum of 2 marks if students use the wrong units.

- No of tourists increased from 143560 in 2014 to 1153520 in 2023. [1 mark]
- The no. of tourists increased **rapidly** from 143560 in 2014 to 1,990,650 in 2017. [1 mark] – *must have sharp/rapid to get the mark for this point*
- However, it decreased slightly to 1,877,870 in 2018, before rapidly decreasing to 239,840 in 2021. [1 mark]
- It then increased steadily to 1,153,520 in 2023. [1 mark]

NOTE: For students who do NOT have an overall point, you will only acquire 2 marks UNLESS if you have used descriptive terms (rapidly, steadily etc). for all your other points.

Marker's remarks:

- Most answers are now providing data to support their points.
- Good answers provided the OVERALL, HIGHEST INCREASE, ANOMALY and/or used descriptive terms.
- Weak answers are merely listing what is being observed.
- Many answers are **STILL NOT providing the overall trend.**
- Important: When candidates want to provide an anomaly, clearly indicate it is an **anomaly** OR use the term **'however'.**

AO2

.....[3]

(ii) Study Fig. 2.3, which is an extract of an article about the state of Maya Bay, which is part of Phi Phi Islands National Park.

Extract of an article about Maya Bay

> Over the years, the number of tourists increased from less than 1,000 to as many as 7,000 or 8,000 visitors a day at its peak. Many were daytrippers visiting from nearby Phuket. On average, around 5,000 people entered the bay each day.
>
> "There were a lot of boats coming in," a marine biologist recall. "I used to check using a drone and I found almost 100 boats at the same time."
>
> The boats' propellers whisked sand up onto the coral, their anchors slamming down onto the delicate sea floor. Incoming tourists walked on the reef as well, most unaware of the damage they were doing.

Fig. 2.3

With reference to Fig. 2.3, explain how tourism has a negative impact on Maya Bay.

Award 1 mark for each explanation, to a maximum of 3 marks.
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

- The many boats that have entered the bay could have added to the water pollution in the area due to the litter generated by the boats. [1 mark]
- The oil and fuel of the boats may leak into the waters, causing the water quality to drop, which can affect aquatic life. [1 mark]
- Large amount of tourists can lead to a lot of trash left behind, polluting the environment, disturbing nature/wildlife. [1 mark]
- The boat propellors and anchors and tourists may destroy the corals due to trampling [1 mark].
    - This can lead to a destruction in the biodiversity and the habitats of many aquatic animals who depend on corals for their shelter and habitat, and even source of food. [1 additional mark]

Marker's remarks:

- Better answers were able to elaborate impacts in varying ways – pollution, destruction in habitat, death to corals.
- Weak answers attempted to elaborate on a single point – death of corals. However, the impact is the same.
- **AVOID copy pasting** evidence when it comes to questions with extracts. Doing that gives a false impression that candidate has explained.
- Candidates should **focus on clearly separating their points.**

AO2

……[3]

(c) Study Fig. 2.4, which shows the current and projected global ecotourism market size.

Current and projected global ecotourism market size (2023 – 2030)

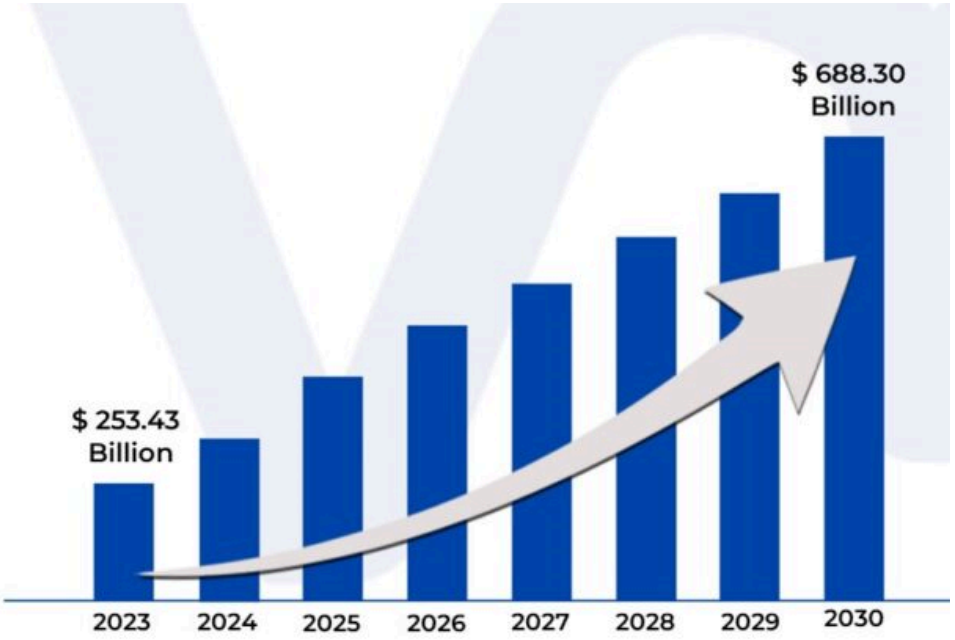


Fig. 2.4

'Ecotourism is the way to go to achieve sustainable tourism development.'

With reference to Fig. 2.4, to what extent do you agree with this statement? Explain your answer.

Level	Marks	Descriptors
3	7 - 9	• Describes ecotourism and another form of sustainable tourism approach (i.e. Community-based tourism / Pro-poor tourism) well, supported with well-developed explanations and clear links to how it leads to sustainable tourism development. • Talks about pros and cons of ecotourism/another form of sustainable tourism approach and explain how it leads to or does not lead to sustainable tourism development. • Arguments for **both sides** are well-developed with good elaboration. • Explanations are logical and well-supported with details • Examples are place-specific, well-elaborated, well-developed, and substantiated with relevant details. • Evaluation is derived from a well-reasoned consideration of the arguments. (weighing to support stand after considering both sides of the arguments well)
2	4 – 6	• Describes ecotourism and/or another form of sustainable tourism approach (i.e. Community-based tourism / Pro-poor

		tourism) relatively well, supported with some explanations and links to how it leads to sustainable tourism development. • Or/and talks about pros and cons of ecotourism and explain how it leads to or does not lead to sustainable tourism development. • Develops explanations that support one side of the discussion well using one or two points with some elaboration. • Explanation is developed, logical and supported with details • Place-specific examples are used to support answer • Evaluation is well-supported by arguments.
1	1 - 3	• Describes ecotourism but with limited description and limited links to how it leads to sustainable tourism development. • Arguments / Description shows basic understanding of issue / phenomenon. • No clear link and explanation to issue • No examples given or generic examples (No e.g. max L1/3) • Simple, missing or unclear evaluation
0	0	No creditworthy response.

Relevant content:

- Approaches for sustainable tourism development
  - Ecotourism
  - Community-Based tourism (CBT)
  - Pro-Poor tourism (PPT)

Possible approaches:

Approach 1:

- Ecotourism+ explanation of strengths of ecotourism (with examples)
- Another form of sustainable tourism (i.e. CBT or PPT) + strengths of the other form (with examples)
- Weighing:
  - Limitations of ecotourism/ CBT or PPT
  - Contextualise limitations to examples/ case-study

Approach 2:

- Ecotourism + explanation of strengths of ecotourism (with examples)
- Limitations of ecotourism
- Weighing: whether the strengths or limitations of ecotourism outweighs which

Marker's remarks:

- Most answers were reaching the highest mark for Level 2 – able to provide two sides and also provide appropriate content.
- Weaker answers **do not DESCRIBE** what is ecotourism – while these answers show somewhat of an understanding of ecotourism, they do not explicitly describe ecotourism – what it is, what are the goals, what are the actions?
- Candidates displayed flexibility in using their examples which was a positive sign – they were able to use similar examples for different strategies. **This is a useful exam strategy – the idea of learning 1-2 examples that can have multiple uses.**

AO3

…… [9]

Section B

Answer Question 3.

3 Cluster 3: Climate

(a) (i) Explain how altitude affects temperature.

Award 1 mark for each explanation, to a maximum of 3 marks.
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

- Temperature decreases as altitudes increases. [1 mark] – *must have this*
- At higher altitudes, the air is less dense and air pressure is lower as gravity pulls most of the air molecules towards the ground surface. [1 mark] – *idea about gravity /air pressure*
- With fewer air molecules, air has a lower ability to absorb heat emitted by the ground in the form of longwave radiation, leading to a lower temperature. [1 mark]
- The earth is heated up by shortwaves radiation from the sun, this causes the ground emits longwave radiation in the form of heat. [1 mark]

Marker's remarks:
- Generally well done.
- Most students were able to acknowledge that the higher the altitude, the lower the temperature (vice versa).
- Some students did not make the link between density of air particles to temperature (omitted the point about air particles absorbing heat)
- A few students had misconceptions about hot air is less dense (X) / higher altitudes, air particles are more dense (X)
- Quite a few students confused longwave radiation and shortwave radiation. (do note that the heat gained is due to the LONGWAVE radiation emitted by the ground and not the shortwave radiation from the sun)

AO1

……[3]

(ii) Study Fig. 3.1, which shows the possible impacts of climate change on the composition of terrestrial ecosystems.

Current and projected future composition of 4 terrestrial bird species

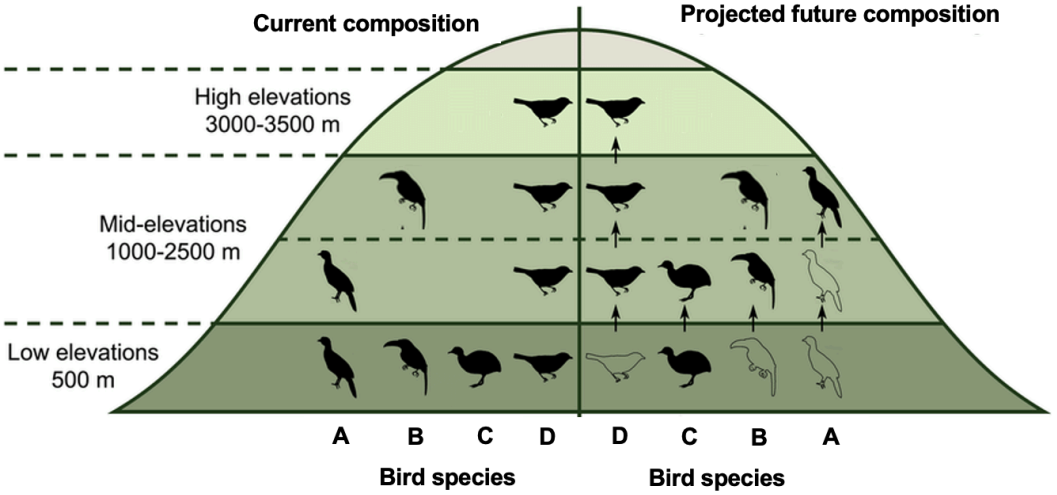


Fig. 3.1

With reference to Fig. 3.1, explain the impacts of climate change on terrestrial species.

Award 1 mark for each explanation of impacts, to a maximum of 4 marks.
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

- Climate change has caused temperature to become higher at places of lower elevations. Hence some species have migrated to places of higher elevation. [1 mark]
- For example, Fig. 3.1 shows that species A, B and D have migrated from places of lower elevations (500m) to places of mid-elevations (1000-2500m). As a result, more species are found at places of mid or higher elevations. For instance, there used to be only 3 species in the mid-elevations but these places are projected to contain 4 species in the future. [1 mark]
- With more species found at higher altitudes, there is going to be increased competition for food and space. [1 mark]
- If some species are unable to adapt to the increase in competition, they will likely face extinction. [1 mark]
- Some species however, will flourish in the new habitat (at the higher altitude). [1 mark]

Marker's remarks:
- Some students did not quote evidence from the figure (always a good practice to quote relevant evidence from the figure to build upon, since it is a with reference question)
- Some students quoted good evidence, however, did not go on to explain the implications of having more bird species in the higher elevations.
- Weaker responses went out of point (NAQ) and talked about trees and aquatic animals migrating polewards – which is not linked to the figure and questions

AO2

……[4]

(b) (i) Study Fig. 3.2 (Insert), which shows a map of the countries most vulnerable to climate change.

Using Fig. 3.2 (Insert), describe the distribution of countries vulnerable to climate change.

Award 1 mark for each description, to a maximum of 4 marks.
Award a maximum of 1 additional mark for further development of each description, where applicable.
Award a maximum of 2 marks if student does not quote specific data from Fig. 3.2.

General trend:

- The countries nearer to the equator are most vulnerable to climate change. / Vulnerability to climate change generally decreases away from the equator or near the poles. [1 mark]
- Developed countries tend to have a lower vulnerability to climate change as compared to developing countries. [1 mark]
    - Developed countries such as Australia, New Zealand, USA have a significantly lower vulnerability as compared to developing countries like India, Chad, Niger, Pakistan. [1 additional mark]
- Countries located in the Northern Hemisphere generally have lower vulnerability that countries located in the Southern Hemisphere. [1 mark]

Specific trends:

- Africa is the continent that contains the most countries with highest vulnerability, particularly Central Africa. [1 mark]
- Countries such as India, Afghanistan, Pakistan, Papua New Guinea and many regions in South East Asia, like Myanmar, Laos, Cambodia, also contains high vulnerability to climate change. [1 mark]
- Countries that have moderate levels of vulnerability to climate change are China, Mongolia, South Africa, most countries in South America and Central America. [1 mark]
- Countries with low levels of vulnerability to climate change are Canada, Norway /Scandinavian countries, Australia, New Zealand and many countries in Western Europe (like Italy, Germany).
- Countries located along the coastal areas such as India, coastal islands in Southeast Asia like Indonesia, Papua New Guinea, have higher vulnerability to climate change. [1 mark]
- There was no data for a country in Central Africa and Greenland. [1 mark]

Marker's remarks:

- Some students were able to pick out that areas near the equator are most vulnerable to climate change as the general trend. (for climate graphs, should always refer to equator if there is a trend based on the latitudes)
- Quite a few students talked about big areas (generalized) such as Americas, Asia, Europe. Students should go beyond the large continent level to pick out **specific countries** (e.g. China, India, USA, Australia) / **regions** (e.g. Southeast Asia, Central Africa, Central America, Middle East)
- Some students used words like 'top', 'bottom', 'middle'. Students should use geographical words using compass directions like North, South, East, West, Central instead.
- Some students sporadically spewed out random countries/areas without picking out a specific trend. It should be linked to a pattern even if it's a

specific trend (i.e. group the most vulnerable, moderately vulnerable, least vulnerable together)

- Some students focused on describing the colour of the scare (e.g. purple-pink, pale yellow) rather than using the language of the scale on the map (e.g. low to high vulnerability) – students should make reference to level of vulnerability rather than the colour (some students only made reference to colour and no link to vulnerability).

AO2

……[4]

(ii) Suggest possible reasons for your answers in **(b)(i)**.

Award 1 mark for each suggestion, to a maximum of 4 marks.
Award a maximum of 1 additional mark for further development of each suggestion, where applicable.

- Countries along the equator experience higher temperatures. With climate change, leading to global warming, Equatorial regions will experience even higher temperatures, making them more vulnerable than countries at higher latitudes. [1 mark]
  - As such, some crops or wildlife may be unable to survive the increased temperatures, causing them to die if they are unable to migrate to higher latitudes with cooler temperatures, leading to food shortages/decrease in food supply / food prices increase. [1 additional mark]
- Severe droughts or floods could arise as tropical areas may get wetter and drier regions get drier and hotter. [1 mark]
  - People in these tropical areas could experience more loss of lives (e.g. through heat stroke) and property due to extreme weather events. [1 additional mark]
- Developed countries (like Canada, USA, Australia) may have greater financial resources to allow them to adapt to the impacts of climate change more effectively, by implementing various adaptation measures such as building of sea walls, and utilizing climate technologies. [1 mark] *– no extra mark for this is given if developing country's side was already given (vice versa for developed country) – i.e., if point of developing country is just opposite of the developed country and no extra development is provided.Unless student stated how having more funds helped the country to invest in certain measures to reduce vulnerability to climate change.*
- Developing countries (like Chad, Niger, Afghanistan) may experience highest vulnerability due to poverty, as they may be unable to cope with the price increase. [1 mark]
  - This can lead to food shortages and people suffering from starvation and malnutrition. [1 additional mark]
- Climate change has brought about global warming, this can lead to higher incidences of Malaria/insect borne diseases being spread to the higher up the latitudes.
  - Due to poverty, some developing countries may lack health resources to get treated, causing high deaths in these countries. [1 additional mark]

- Countries located surrounded by sea are more vulnerable as they are more exposed to the impacts of sea level rise or weather-related natural disasters such as typhoons. [1 mark]
- Some countries, especially the more developed countries had international agreements or policies to manage the impact of climate change, reducing its vulnerability. [1 mark]

Marker's remarks:
- Most students were able to provide reasons for the trends.
- Some focused a lot of the latitude and solar angle (many errors in description of solar angle discovered through this question though solar angle is **not** the focus here) – e.g. sun rays have a larger solar angle (X) – should be sun rays hit the lower latitudes at a larger solar angle. (may need to clarify misconception of phrasing)
- Misconception: Bigger countries does not mean more developed and therefore less vulnerable. (do not use bigger esp if it is not defined – bigger in terms of? - area size? Population size?)

AO1

……..[4]

(c) Study Fig. 3.3 (Insert), which shows a seawall along a coast in United Kingdom.

With reference to Fig. 3.3 (Insert), explain how the seawall helps to build community resilience to climate change.

Award 1 mark for each explanation, to a maximum of 3 marks.
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

- The seawall helps to prevent the sea from advancing onto the land. [1 mark]
- This helps to protect people, properties and environments from coastal floods. [1 mark]
- This allows people to ensure that people can continue with their livelihoods at coastal areas without any/adjust to effects of climate change and its effects, such as sea level rise, to reduce harm caused. [1 mark]
- Seawall gives communities more time to respond and organise themselves in the face of a climatic hazard. [1 mark]

Marker's remarks:
- Some students mentioned high tides instead of sea level rise or coastal flooding, students should be instead talk about sea level rise / weather-related disasters that cause it. High tides are a daily occurrence.
- Generally well done (for the sea wall part), but weaker responses did not make links to community resilience and focused solely on the use and function of the sea wall as an adaptation measure.
- Very weak responses talked about sense of belonging due to the sea wall?? (NAQ)

AO1

……..
[3]

4 Cluster 4: Tectonics – Dummy Question

(a) Study Figs. 4.1 (Insert) and 4.2 (Insert), which show the Andes Mountain Range in South America.

(i) Using Figs. 4.1 and 4.2, describe the features of the Andes Mountain Range in South America.

Reserve 1 mark each from each diagram.
Award 1 mark for every supporting evidence provided.
Award a maximum of 1 additional mark for further elaboration of any of the supporting evidence, where applicable.

Possible responses include:

- Fig. 4.1: The Andes Mountain Range has steep peaks as observed from the narrowing high peaks in Fig. 4.1. [1 mark]
- Fig. 4.1: The Andes Mountain Range is very high as noted from the snowy surfaces on the mountain range which indicates that the altitude is very high. [1 mark]
    - Fig.4.2: As observed from Fig. 4.2, you can also see that most of the mountain range is around 2000m to 4000m, with a considerable central area which grows over the height of 4000m. [1 additional mark]
- Fig. 4.1: The Andes Mountain Range has a very rough surface. This can be observed by the rocky surfaces on the sides of the mountain. [1 mark]
- Fig. 4.2: The Andes Mountain Range stretches out over a long distance as observed by the fact that it covers almost the entire western coastline of South America. [1 mark]
    - Fig. 4.2: The total distance covered is about 6000 km. [1 additional mark]

AO2

……

[4]

(ii) The Andes Mountain Range is formed due to the convergence of the oceanic Nazca Plate and the continental South American Plate.

Describe the formation of the landforms formed at this plate boundary.

Award 1 mark for each explanation point.

- Due to convectional currents in the mantle, the oceanic Nazca plate collides with the continental South American Plate. [1 mark]
- The denser oceanic plate subducts under the continental plate and this forms a deep oceanic trench at the subduction zone. [1 mark]
- As the subducting plate sinks into the mantle, water is forced out of the oceanic crust as it is heated. The water mixes with the overlying uppermost mantle and lowers the melting point, causing it to melt and form magma. The

lighter, less dense magma rises through weak areas in the continental crust. [1 mark]
- The magma erupts as lava and cools and solidifies to form volcanoes on the surface. [1 mark]
- Enormous pressure at this plate boundary causes rocks on the continental plate to be uplifted and buckled forming fold mountains. [1 mark]

AO1

.....

[5]

(b) Study Fig. 4.3 (Insert) which shows the Shake Intensity Map of the Taiwan Earthquake that occurred in April 2024.

(i) Using Fig. 4.3, describe the pattern of shaking caused by the Taiwan Earthquake, April 2024.

Award 1 mark for each valid description.
Award a maximum of 1 additional mark for further elaboration/further information of any of the descriptions.

Possible responses include:
- [Overall Description]: The shake intensity is generally stronger nearer to the epicenter of the earthquake. [1 mark]
  - [Elaboration]: This is especially so North and Northwestwards of the epicenter, reaching into Hualien city. [1 additional mark]
- [Specific Description]: The strongest shake intensity is only present at the western side of the nation. [1 mark]
- [Specific Description]: Strong shake intensity mostly stretches out northwest and north from the epicenter. [1 mark]
  - [Elaboration]: It stretches out to a distance of about 75 miles. [1 mark]
  - [Anomaly]: However, there is one area south of Taichung and in Douliu City, where strong shaking is also observed despite this area being the completely opposite side of the nation from the epicenter. [1 mark]
- [Specific Description]: Weak and Moderate shake intensity is present almost throughout the nation except for the southernmost area. [1 mark]

AO2

.....

[4]

(ii) Study Fig. 4.4 (Insert) which shows a photograph from the aftermath of the Taiwan Earthquake, April 2024.

With reference to Fig. 4.4, explain the possible impacts an earthquake such as this could cause.

Award 1 mark for each impact explained.
Award a maximum of 1 additional mark for further elaboration of any of the explanations. This can include examples.

Possible responses include:
- [Social/Health]: An earthquake such as this can cause death and injury to people. The collapse and destruction of buildings will cause severe injury to

people who were in the buildings and possibly death if they are not rescued. [1 mark]
    - [Economic]: The collapse of the buildings will also result in repair costs which the government has to bear. This will affect economic development in other areas. [1 additional mark]
- [Economic/Social]: Earthquakes such as these may also disrupt transport networks/roads. This may prevent people from reaching their loved ones. [1 mark]
    - [Social/Health]: It may also prevent rescue workers from reaching those in need on time which may lower their chances of survival. [1 additional mark]
- [Health]: These earthquakes may also leave people suffering from psychological stress and survivor trauma, as they may have lost their loved ones during the incident. [1 mark]
- [Social]: These earthquakes may also leave people homeless for the time being as their homes may have been destroyed during the earthquakes. [1 mark]

AO1

……

[5]

[Total: 18]

End of Paper

Copyright Acknowledgements:

Question 1	Fig. 1.1	https://www.youtube.com/watch?v=4P8laK-JmSk
Question 2	Fig. 2.2	https://www.statista.com/statistics/1038782/thailand-number-of-tourists-visiting-noppharatthara-beach-and-phi-phi-islands-national-park/
	Fig. 2.3	https://edition.cnn.com/travel/article/maya-bay-thailand-recovery-c2e-spc-intl/index.html
	Fig. 2.4	https://www.verifiedmarketresearch.com/product/ecotourism-market/
Question 3	Fig. 3.1	https://www.researchgate.net/figure/Current-and-potential-future-patterns-in-functional-dispersion-FDis-of-frugivorous-bird_fig1_337571299