Paya Lebar Methodist Girls' School (Secondary)
Preliminary Examination 2024
Secondary 4 (Express)

Subject: Humanities (Geography)	Date: 14 August 2024
Subject Code: 2260/02	Duration: 1 hr 45 min
Name : ( )	Class :

Instructions to Candidate:

Do not open this booklet until you are told to do so.
You must answer **all the questions**.
Write your answers in this booklet.
Write in dark blue or black pen.
Do not use highlighter, glue or correction fluid.

Candidates should support their answers with the use of relevant examples.
Sketch maps, graphs and diagrams should be drawn whenever they serve to illustrate an answer.

The number of marks is given in brackets [ ] at the end of each question or part question. The total marks for this paper is **50**.

FOR TEACHER'S USE	
Question 1 • Geography in everyday life	/14
Question 2 • Tourism	/18
Question 3 • Climate	/18
Total	/50

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Answer **all** questions.

1 Cluster 1: Geography in Everyday Life

(a) Study Fig. 1.1 and Fig. 1.2, which show a provision store in Tiong Bahru, Singapore, that has been operating since 1938. Fig. 1.1 shows the store on its closing day while Fig. 1.2 is a newspaper report on the store's closing day.

Fig. 1.1



FIG 1.2

After 85 years, enduring the turmoil of World War II and various other crises such as COVID-19, the old-school provision shop in Tiong Bahru is closing its doors. On Friday, the family running the store held a small farewell party to thank their loyal customers for their support over the years. "Absolutely I will miss this place because it is a great part of the heritage in Tiong Bahru. The estate is going to be missing a very important place, a location that holds the community together," a regular customer said. The owner of the shop said tearfully, "I've spent my lifetime here and made a lot of friends that became my family, but all good things must come to an end."

With reference to Fig. 1.1 and 1.2, explain how people can de sense of place.

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(b) Explain how regulating ecosystem services in a tropical rainforest can provide benefits to people. [2]

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(c) Study Fig. 1.3, which shows firefighting effort during an intense oil storage tank fire that happened on Pulau Busing, Singapore, in 2018.



Fig. 1.3

Using Fig. 1.3 and your own knowledge, suggest relevant disaster risk management strategies that Singapore has taken to safeguard the sustainability of urban neighbourhoods. [4]

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(d) A group of Singapore students were investigating the cultural ecosystem services of parks in Singapore. As part of their investigation, they conducted a survey on a weekday, between 8 am to 9 am with users of Pasir Ris Park.

The survey gathered information regarding their visit duration and residential proximity, as shown in Fig. 1.4 and Fig. 1.5 respectively.

Visit duration of Pasir Ris Park visitors

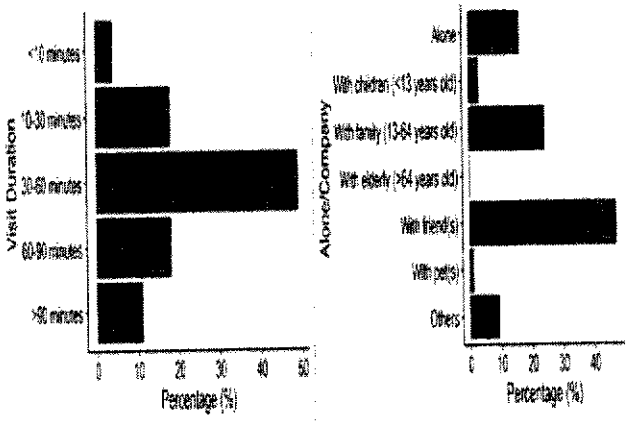


Fig. 1.4

Residential proximity of Pasir Ris Park visitors

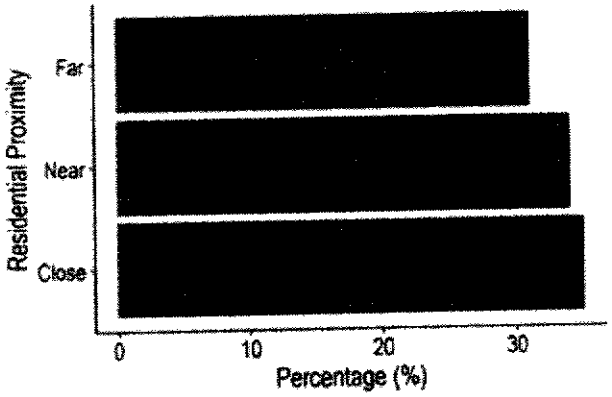


Fig. 1.5

Using Fig. 1.4 and Fig. 1.5, evaluate the validity of the students' findings regarding the use of Pasir Ris Park. [5]

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2 Cluster 2: Tourism

(a) Study Fig. 2.1, which shows an example of tourists' experience in Mongolia.



Fig. 2.1

(i) With reference to Fig. 2.1, state the stage of tourism development shown. [1]

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(ii) Describe the personality type of the tourist who will make this trip to Mongolia. [2]

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(b) Using named examples, explain how the need to achieve personal growth and self-fulfilment has increased people's motivation to travel. [2]

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(c) Study Fig. 2.2, which is an extract about the tourism issues faced in Fujikawa-cho, Japan.

Fig. 2.2

Travellers are flocking to destinations in Japan to capture iconic photos for social media, causing problems. In April 2024, Fujikawa-cho officials announced they will build an 8-foot-barrier to prevent tourists from taking pictures of Mt. Fuji.
The influx of tourists is causing problems for businesses and residents in the area. Signage and security guards brought in to manage the issue have been largely ignored. There are even reports of tourists climbing onto the roof of neighbouring buildings to get that highly coveted photo. People would block streets, leave behind litter, and irritate local residents. While authorities regret the need to block the view, they do not know how else to deal with the problem.

With reference to Fig. 2.2, outline the impacts associated with tourism. [4]

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(d) "Ecotourism is more effective than pro-poor tourism in achieving sustainable tourism development."

To what extent do you agree with this statement? Explain your answer with the support of relevant examples. [9]

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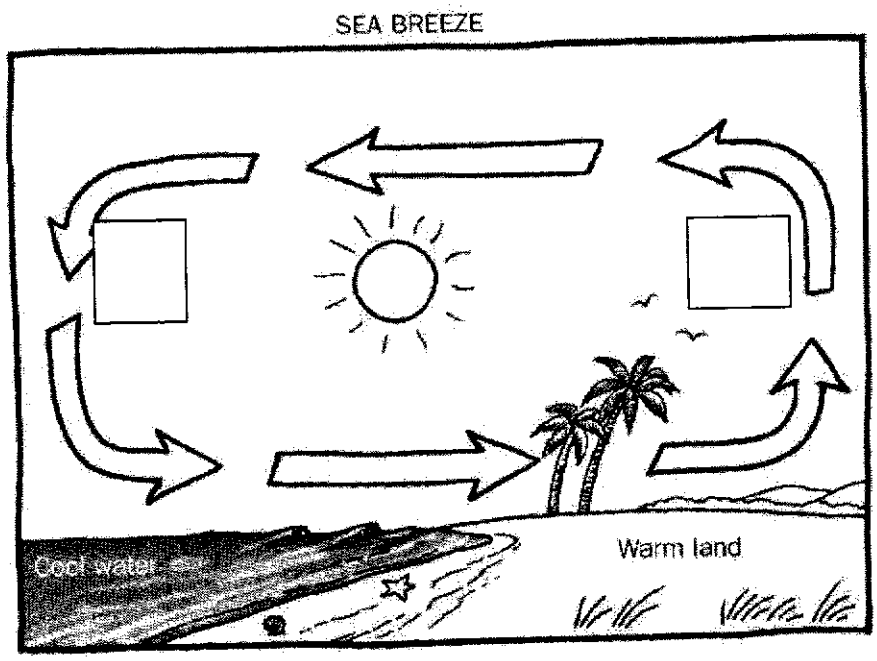
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3 Cluster 3: Climate

(a) Study Fig. 3.1, which shows sea breeze occurring in an area.



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Fig. 3.1

(i) Label the following in the boxes in Fig. 3.1 above: [1]

- **Area of low pressure (LP)**
- **Area of high pressure (HP)**

(ii) Describe the formation of sea breeze. [3]

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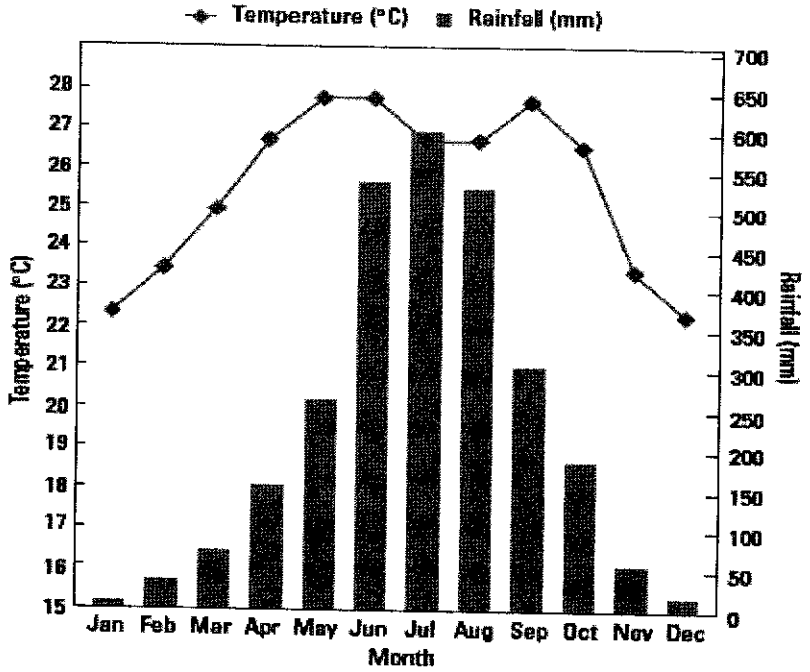
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(b) Study Fig. 3.2, which shows a climograph of an area experiencing tropical monsoon climate.



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FIG 3.2

Using Fig. 3.2, describe the temperature and rainfall patterns shown in the climograph. [4]

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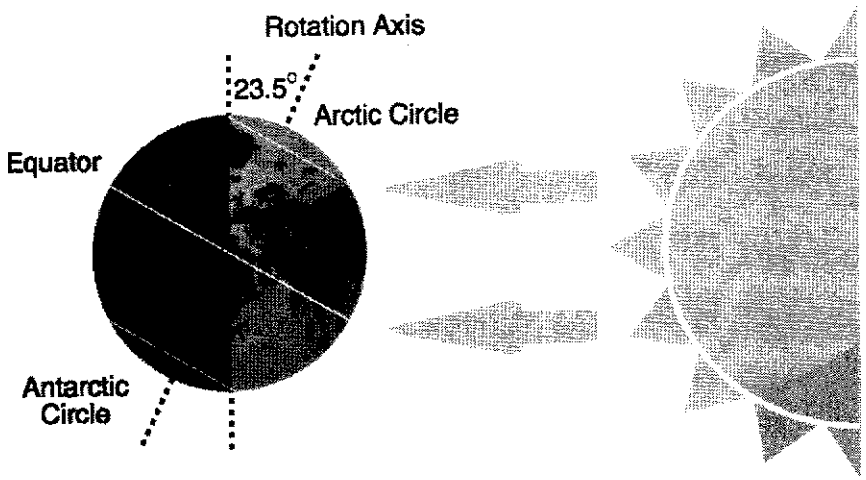
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(c) Study Fig. 3.3, which shows the earth experiencing day and night.



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FIG 3.3

[3]

With reference to Fig. 3.3, explain what causes Earth to experience night and day and its effect on air temperatures

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(d) Study Fig. 3.4, which shows the annual percentage change in carbon dioxide emissions in 2022.

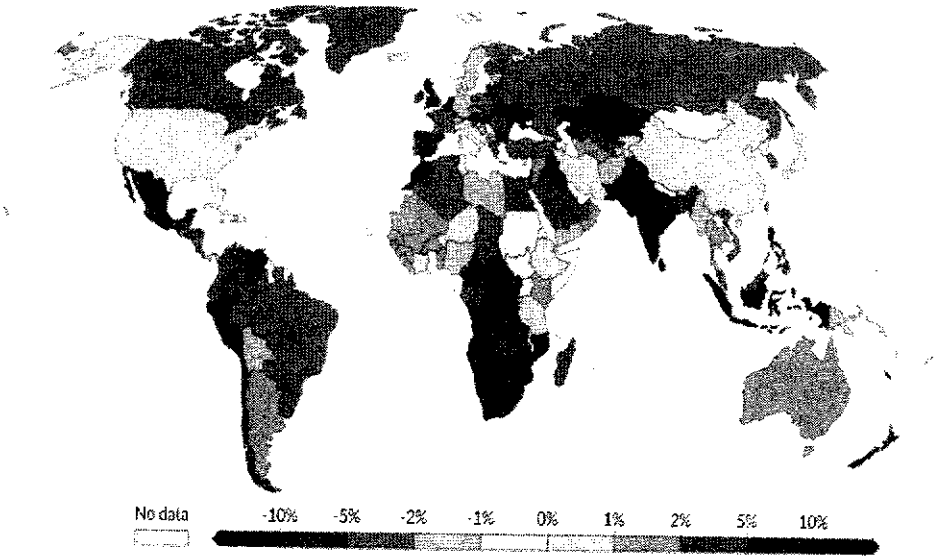


Fig. 3.4

Using Fig. 3.4, describe the annual percentage change in carbon dioxide emissions in 2022. [3]

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(e) Explain how climate change will impact the aquatic ecosystems. [4]

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END OF PAPER

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ANSWER SCHEME

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Answer **all** questions.

1 Cluster 1: Geography in Everyday Life

(a) Study Fig. 1.1 and Fig. 1.2, which show a provision store in Tiong Bahru, Singapore, that has been operating since 1938. Fig. 1.1 shows the store on its closing day while Fig. 1.2 is a newspaper report on the store's closing day.



Fig. 1.1

After 85 years, enduring the turmoil of World War II and various other crises such as COVID-19, the old-school provision shop in Tiong Bahru is closing its doors. On Friday, the family running the store held a small farewell party to thank

Fig. 1.2

With reference to Fig. 1.1 and 1.2, explain how people can develop a sense of place. [3]

- People might have **repeated encounters with this place**. This helps them to recall the character and features of this location that has helped to **create meaning and memories** for them.
- People might have grown up in this neighbourhood and **visited this shop on a regular basis** which creates **a strong memory** of this

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place for them.

- People can also develop a sense of place when there are **significant or memorable events** at **gathering places** like this provision shop.
- This shop can also be **the interaction point** for many residents in this area, **creating memories through their time in the shop**, creating a sense of place.

Any 3 @ 1 mark each

(b) Explain how regulating ecosystem services in a tropical rainforest can provide benefits to people. [2]

- Regulating ecosystem services refers to **the benefits obtained from the regulation of ecosystem processes**.
- **Trees** in the tropical rainforests provide a canopy of shade to **lower** surface and air **temperatures**.
- The vegetation cover can **reduce surface runoff by retaining water in the soil.** This is also known as water flow regulation.
- The trees or other plants in the park play an important role in **regulating air quality by removing pollutants** from the atmosphere.

Any 2 @ 1 mark each

(c) Study Fig. 1.3, which shows firefighting effort during an intense oil storage tank fire that happened on Pulau Busing, Singapore in 2018.



Fig. 1.3

Using information from Fig. 1.3 and your own knowledge, suggest relevant disaster risk management strategies that Singapore has taken to safeguard the sustainability of urban neighbourhoods. [4]

- As illustrated in Fig. 1.3, the **Singapore Civil Defence Force (SCDF) is well-equipped and trained to handle fire incidents**, which are a significant risk in Singapore.
- **Town councils** also have the responsibility to **cooperate with other government agencies** in securing public safety and preventing disease or injury.

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- Another strategy is to improve residents' **emergency preparedness** to **respond to natural and technological hazards**.
- The SCDF conducts a **community emergency preparedness programme** which focuses on **key lifesaving skills** and important **emergency procedures**.
- As a result, the participants will gain a **deeper understanding** on how they can **help others during an emergency**.

- Next, the implementation of **monitoring and warning system warns the public of imminent threats** that may endanger lives and property such as natural and man-made disasters.
- SCDF has a **public warning system** which is a **network of sirens placed at strategic points throughout the city**.
- This is to enable residents to **respond quickly, evacuate safely, and minimize injuries** and fatalities.

Award maximum 3 marks if only one strategy is given.
Award a maximum of 1 additional mark for further development of each explanation, where applicable.

(d) A group of Singapore students were investigating the cultural ecosystem services of parks in Singapore. As part of their investigation, they conducted a survey on a weekday, between 8 am to 9 am with users of Pasir Ris Park. The survey gathered information regarding their visit duration and residential proximity, as shown in Fig. 1.4 and Fig. 1.5 respectively.

Visit duration of Pasir Ris Park visitors

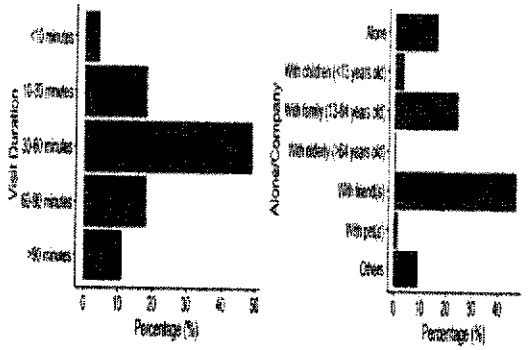


Fig. 1.4

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Residential proximity of Pasir Ris Park visitors

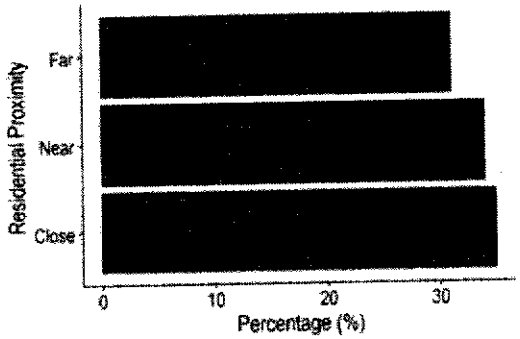


Fig. 1.5

Using Fig. 1.4 and Fig. 1.5, evaluate the validity of the students' findings regarding the use of Pasir Ris Park. [5]

- **The findings are valid** because the data collected addresses the investigation question, **highlighting the visit duration** [1 mark]. **80% of users spent at least 30 minutes in the park** which indicates that the park provides **sufficient cultural ecosystem services** that encourage users to **stay for an extended period**. [1 additional mark].
- The **findings are valid** because the data collected addresses the investigation question, **highlighting the residential proximity of the users** [1 mark]. About **30% of the users came to Paris Ris despite living far away**, and it suggests that the park's **cultural ecosystem services** are significant enough to **attract visitors from distant locations**. [1 additional mark].
- The findings may not be valid because **visitors might not have explored the park**. [1 mark] This could happen for visitors who were **merely walking through the park** and were not there for the green spaces. [1 additional mark].
- The findings may not be valid as the **investigation was only carried out in one day** and this may affect the reliability of the data. [1 mark] The students may get a **different result during a weekend** when the park is **more crowded**. [1 additional mark].
- The findings may not be valid as the investigation was **only carried out between 8 am to 9 am** [1 mark] and they may not take into consideration the **users who visit the park in the evening or afternoon**. [1 additional mark].

Need to have both sides. Max 3 marks if students only discuss one side.
Max of 3 marks if no data is given from Fig. 1.4/ Fig. 1.5

2 Cluster 2: Tourism

(a) Study Fig. 2.1, which shows an example of tourists' experience in Mongolia.

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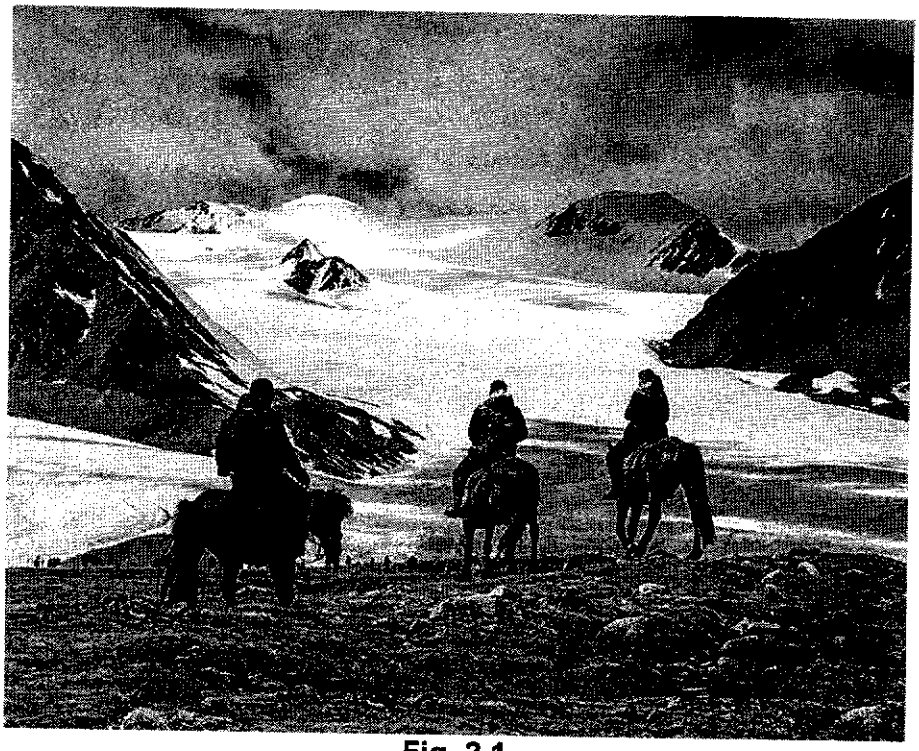


Fig. 2.1

(i) With reference to Fig. 2.1, state the stage of tourism development shown. [1]

Exploration (1 mark)

(Other stages of development not accepted)

(ii) Describe the personality type of the tourist who will make this trip to Mongolia. [2]

- Venturers – individuals who **reach out and explore the world in all of its diversity**.
- Prefer to **travel alone or in small numbers** to explore less developed, unique places where they can participate in new experiences even if it is not so convenient.
- **More likely to visit new places each time they travel**, hence they prefer to make their own travel plans, and often opt for niche tourism.

Any 2 @ 1 mark each

(b) Using named examples, explain how the need to achieve personal growth and self-fulfilment has increased people's motivation to travel. [2]

Need to achieve personal growth and self-fulfillment

- Some travellers may choose a travel destination where they can **pick up a new skill such as cooking local cuisines**.
- For example, many **cooking schools have sprung up in Bali** to cater to tourists' desire to learn more about Balinese cuisine.
- Pilgrimage tourism is another example where tourists **travel to sacred sites to learn more about their faiths and grow spiritually**.

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- Every year, more than **two million Muslims travel to Mecca in Saudi Arabia for the pilgrimage**, where they perform a series of rituals to grow spiritually.

Award 1 mark for each point, award a maximum of 1 mark if no example is given.

(c) Study Fig. 2.2, which is an extract about the tourism issues faced in Fujikawa-cho, Japan.

> Travellers are flocking to destinations in Japan to capture iconic photos for social media, causing problems. In April 2024, Fujikawa-cho officials announced they will build an 8-foot-barrier to prevent tourists from taking pictures of Mt. Fuji

Fig. 2.2

Using Fig. 2.2, outline the impacts associated with tourism. [4]

- Fig. 2.2 states " Signage and security guards brought in to manage the issue have been largely ignored."
- This shows that the large volume of **tourists is creating significant social problems**, as efforts to manage and regulate tourist behaviour are being disregarded, leading to **frustration among local businesses and residents**.
- Fig. 2.2 states "People would block streets, leave behind litter, and irritate local residents."
- This indicates that tourists are contributing to **environmental degradation and social disturbances**. Blocking streets and littering not only disrupt daily activities for residents but also create an **unsightly and unhealthy environment**.
- Fig. 2.2 states "There are even reports of tourists climbing onto the roof of neighbouring buildings to get that highly coveted photo."
- The disregard for personal property and safety regulations negatively impacts the local community's **sense of security and privacy**.

Award 1 mark for each complete point.
Award a maximum of 1 additional mark for further development of each explanation, where applicable.
Reserve 1 mark for making reference to Fig. 2.2

(d) "Ecotourism is more effective than pro-poor tourism in achieving sustainable tourism development."

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To what extent do you agree with this statement? Explain your answer with the support of relevant examples. [9]

I agree with this statement to a large extent.

Firstly, ecotourism is a form of sustainable tourism often taking place in natural areas, providing tourists with opportunities to experience nature while aiming to conserve the environment and benefit local communities. For instance, the Galapagos Islands in Ecuador, known for their unique flora and fauna, were designated a UNESCO World Heritage site in 1979. To preserve this biodiversity, 97% of the islands' total area was declared a national park, with only 3% designated for human habitation. To minimize disturbances to wildlife, only a limited number of visitors are allowed each day, and an entrance fee of USD$100 is charged, with the revenue funding conservation projects. Tourists must be accompanied by a guide, who educates them about the environment. Locals participate in ecotourism by offering day tours and homestays to small groups of tourists. This enables the environment to continue to attract tourists, thus ensuring sustainable tourism development. However, ecotourism may not be sustainable when sites become overwhelmingly popular, leading to potential environmental degradation. For example in the Galapagos Islands, oil spills from a large number of boats have resulted in serious water pollution. The large increase in the number of tourists has resulted in erosion along some trails, as well as disturbances to animals and plants.

Next, pro-poor tourism (PPT) is an approach to tourism development focusing on improving the livelihoods of the poor through training and access to microfinance. It aims to generate net benefits and improve the well-being of impoverished communities. An example of successful PPT is found in villages around China's Three Parallel Rivers Region, a UNESCO World Natural Heritage Site. Here, villagers have established tourism businesses with financial assistance from authorities, leading to increased income and living standards. However, channeling benefits to the poor can be challenging compared to direct investment in social services, as some may lack the skills, finances, and confidence to participate in tourism initiatives.

In comparison, while community-based tourism and pro-poor tourism contribute to sustainable tourism development, ecotourism offers a more comprehensive approach. Community-based tourism emphasizes close interactions between tourists and host communities, fostering cultural exchange and economic benefits, but may have limited impact on broader environmental conservation efforts. Similarly, pro-poor tourism focuses on economic empowerment but may overlook ecological concerns. In contrast, ecotourism operates across scales, connecting local actions with global environmental awareness, and addressing both local well-being and broader sustainability concerns through responsible travel and ecological preservation.

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Level	Marks	Generic Level Descriptors
3	7 - 9	Develops arguments that supports both sides of the discussion clearly using a range of points with good elaboration. Examples used demonstrate a comprehensive understanding of the issue or phenomenon. Evaluation is derived from a well-reasoned consideration of the arguments.
2	4 - 6	Develops arguments that support one side of the discussion well using one or two points with some elaboration. Example(s) used demonstrate a good understanding of the issue or phenomenon. Evaluation is well supported by arguments.
1	1 - 3	Arguments are unclear with limited description or may be listed. No examples provided or examples are generic, demonstrating a basic understanding of the issue or phenomenon. Evaluation is simple, missing or unclear.
0	0	No creditworthy response

3 Cluster 3: Climate

(a) Study Fig. 3.1, which shows sea breeze occurring in an area.

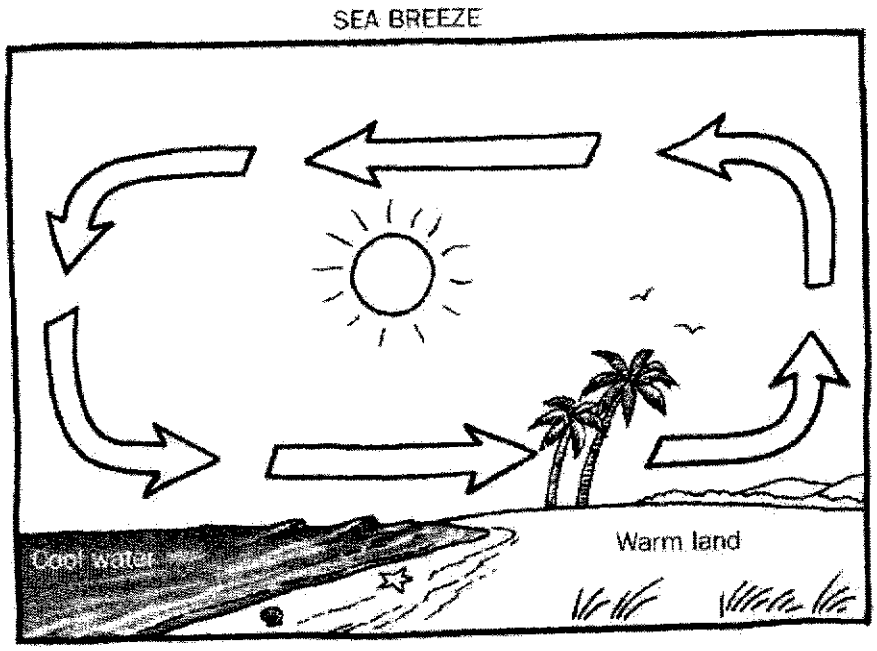


Fig. 3.1

(i) Label the following in the boxes in Fig. 3.1 above: [1]

- **Area of low pressure (LP)**
- **Area of high pressure (HP)**

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Award 1 max for correct labelling of LP and HP

(ii) Describe the formation of sea breeze. [3]

- **Air over the land is heated up faster** than air over the sea. Warm **air is less dense and rises**, forming a **low pressure area.**
- Air over the sea is cooler as the **sea heats up slower**. The **cooler air is denser and sinks**, forming a **high pressure area.**
- As air moves from a **high pressure area to a low pressure area**, this causes air to move from the sea towards the land, forming a **sea breeze.**

Award 1 mark for each point

(b) Study Fig. 3.2, which shows a climograph of an area experiencing tropical monsoon climate.

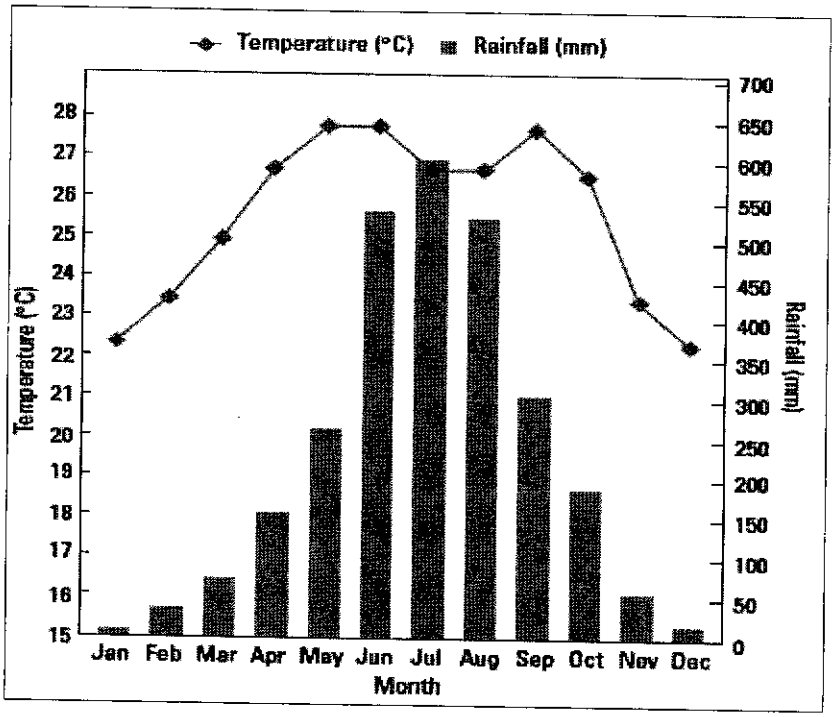


Fig. 3.2

Using Fig. 3.2, describe the temperature and rainfall patterns shown in the climograph. [4]

- The **mean annual temperature** is high at **25°C**.
- The **highest mean monthly temperature** is about **27.5 °C in May, June and September.**
- The **lowest mean monthly temperature** is about **22 °C in December**
- There is **distinct wet and dry seasons.**
- Rainfall is significantly higher between June and August, with **highest rainfall in July of 600mm,**
- and **lower rainfall** between November and March, with lowest in

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January of 10mm.

Award a maximum of 3 marks if student only describes temperature or rainfall pattern

Award 1 mark for each point

(c) Study Fig. 3.3, which shows the earth experiencing day and night.

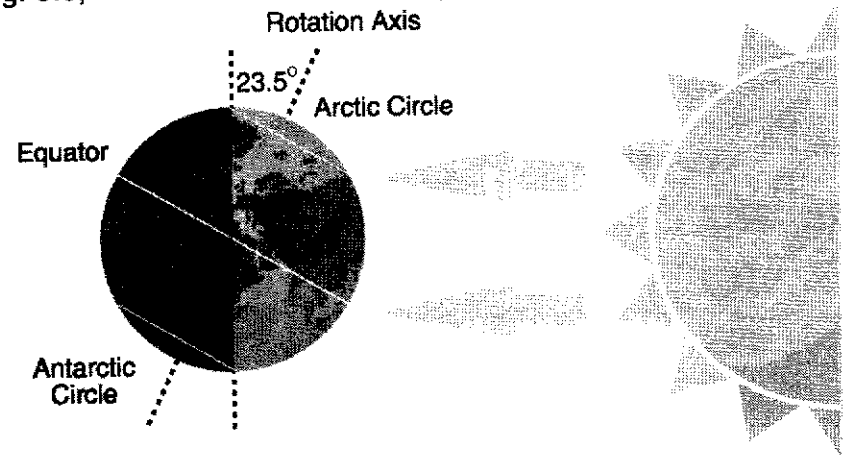


Fig. 3.3

With reference to Fig. 3.3, explain what causes Earth to experience night and day and its effect on air temperatures [3]

- Mainly due to the **Earth's rotation on its own axis**.
- As Earth rotates, the **side facing the sun experiences day and receives solar radiation**, thus it experiences **higher temperatures**.
- As the earth continues rotating, this **side will eventually face away from the sun and experience nighttime**, where it does not receive solar radiation, and thus, experiences **lower temperature**.

(d) Study Fig. 3.4, which shows the annual percentage change in carbon dioxide emissions in 2022.

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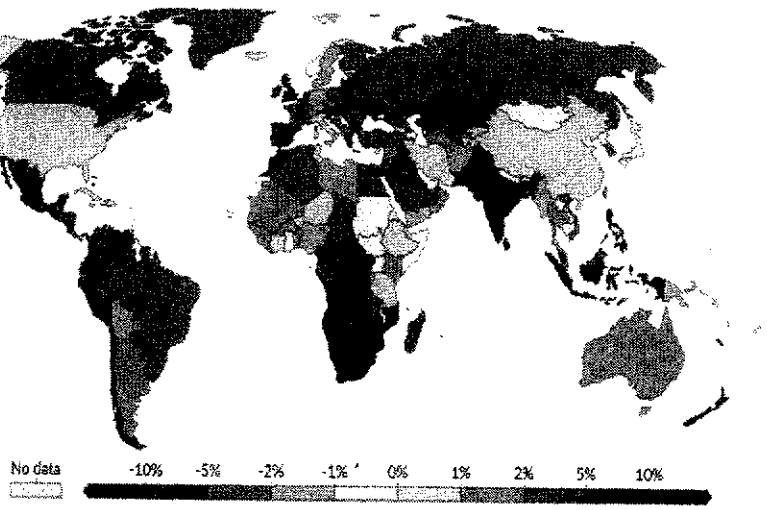


Fig. 3.4

Using Fig. 3.4, describe the annual percentage change in carbon dioxide emissions in 2022. [3]

- The annual percentage change in carbon dioxide emissions is generally **higher** in **Central and Southern parts of Asia, Australia and North America.**
- Countries such as **Indonesia, Kazakhstan, Peru and Mexico** showed the **highest percentage change of more than 5%** in carbon dioxide emissions in 2022.
- Countries such as **USA, Canada, China, Australia and Argentina** showed an **increase of 0 to 2%** in carbon dioxide emissions in 2022.
- Countries such as **Brazil, Chile, Russia, New Zealand and South Africa** showed the **highest percentage decrease of 5% to 10%** in carbon dioxide emissions in 2022.

Award 1 mark for each point
Award a maximum of 2 marks if no data is given

(e) Explain how climate change will impact the aquatic ecosystems. [4]

Changes in geographic distribution of aquatic species

- Due to warming oceans, aquatic species migrate to areas where temperatures are more favourable/ In general, aquatic species move polewards and into deeper, cooler waters.
- This will cause equatorial regions to experience a decrease in biodiversity while poleward regions will experience an increase in biodiversity.

Changes in composition of aquatic ecosystems

- As the geographic distribution of species changes, the mix and population densities of prey, predators and competitors in the ecosystems also change.

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- For example, Tropical fish such as parrotfish and rabbitfish have migrated to cooler waters in Japan and Australia. These species feed on kelp in these cooler waters, causing a huge decline in kelp which affects other species that depend on kelp for food

Threaten coral reefs

- Increase in ocean temperature causes algae that live in corals to leave them, turning the corals white. Bleached corals are more likely to die.
- When corals die, other aquatic species lose their food source and habitat, and their populations may decline, affecting the entire ecosystem

Ocean acidification

- The increase in carbon dioxide emissions leads to oceans absorbing excessive amounts of carbon dioxide.
- This leads to carbonic acids forming in the water, and carbonic acids dissolve calcium carbonate, which is needed by corals, mussels and oysters to form their skeletons and shells.
- At current rates, coral reefs are eroding faster than new corals can form.

Award 1 mark for each complete point.
Award a maximum of 1 additional mark for further development of each explanation, where applicable.
Award maximum 3 marks if only one impact is given.

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