



EUNOIA JUNIOR COLLEGE
JC2 Preliminary Examination 2025
General Certificate of Education Advanced Level
Higher 2

H2 GEOGRAPHY

Suggested Marking Guide

9173/01

02 September 2025

3 Hours

Section A

Answer **both** questions.

Cluster 1: Development, Economy and Environment

- 1 Resource 1 shows the inward flows of foreign direct investment (FDI) globally from 2007 to 2019. Resource 2 shows the changes in employment by sector in China from 1952 to 2019. Resource 3 shows Chinese electric vehicle company Build Your Dreams (BYD)'s sales volume and manufacturing plants around the world in 2023.

(a) Describe **two** ways to measure sustainable development.

[4]

Award 1 mark for each description of how sustainable development could be measured.

Award a maximum of 1 additional mark for further development of each description.

Award a maximum of 2 marks for description on one way to measure sustainable development only.

Possible responses include:

- One way of measuring SD is to use a common set of social, economic and environmental indicators since SD is about the **development across these various dimensions**. [1 mark] This set of indicators could include “unemployment rate”, “air quality” and “crime rate” and the aggregate response from these indicators would provide an indication of whether SD has been achieved. [1 additional mark]
- Another way to measure SD is to examine whether its dimensions such as economic growth is **sustained over the years**, through Sustainable Development Goals (SDGs). [1 mark] For instance, by looking at SDG8 on decent work and economic growth and comparing how its indicators such as “GDP per capita growth rate” as well as “unemployment rates” **vary over the years**, it is possible to measure whether SD has been achieved. [1 additional mark].
- Another way of measuring SD is to measure the extent to which its dimensions vary across the world by looking at for instance social inclusion varies **across and within countries**. [1 mark] This can be examined through various SDGs such as SDG4 which looks at inclusive and quality education for all, and SDG5 on gender equality. [1 additional mark]

(b) Using Resource 1, describe the changes in inward flows foreign direct investment (FDI) from 2007 to 2016.

[4]

Award 1 mark for every description of changes in inward flows of FDI from 2007 to 2016.

Award maximum 1 additional mark for further development of each description.

Possible responses include:

- Generally, most countries seem to have experienced **up to 500% increase in inward FDI** from 2007 to 2016. [1 mark]
- **Developing regions** such as South America, Africa and Asia generally experienced **greater percentage of increase in inward FDI** as compared to the more developed areas such as United States, Australia and United Kingdom. [1 mark] Most of these developing regions experience 500% increase in inward FDI

or more such as China while the developed areas experience 100% increase such as the United Kingdom and Australia. [1 additional mark]

- However, there were **some countries in Europe** that have experienced a **decrease in inward FDI of up to 100%**. [1 mark]

(c) Using Resource 1, account for the distribution in the stocks of foreign direct investments (FDI). [6]

Award 1 mark for every explanation for the variations in the stocks of FDI.

Award maximum 1 additional mark for further development of every explanation.

Possible responses include:

- More developed regions generally receive higher amounts of FDI stock as they generally have a more **highly skilled labour force** that can attract TNCs to locate higher-valued parts of their global production networks in these economies. [1 mark] For instance, developed economies such as the United States is home to the HQs of many high-tech firms such as Meta, Apple and Microsoft which help to bring in significant amounts of FDI worth \$6,391 billion. [1 additional mark]
- In contrast, developing regions in the Global South in parts of Africa and South America tend to receive much lower FDI stock (\$1 to \$100 billion) due to the **political instability** in some of the developing regions may deter TNCs from investing in these economies since it can **render their businesses/ profits to be volatile**. [1 mark]
- Some emerging economies such as Brazil in South America and China in Asia received relatively high inward FDI of about \$1,000 billion due to **the large labour market available for labour-intensive manufacturing processes** to be offshored there. [1 mark] The large labour market available usually also **meant that labour costs will be cheaper**, thus lowering the TNCs' costs of production and more profitable for manufacturing processes to be located in these places. [1 additional mark]

(d) Cite data from Resource 2 to describe the changes in the structure of China's economy from 1952 to 2019. [5]

Award 1 mark for each description using data on the changes in China's economic structure.

Award maximum 1 additional mark for further development of every description.

Possible responses include:

- While China's economy was largely agricultural in 1952 as 82% of China's workforce was employed in the sector, it has since become the least significant sector in 2019, as merely 26% of workforce was engaged in agriculture. [1 mark] This shows a long-term decline in the agricultural sector as China industrialised and modernised. [1 additional mark]
- Meanwhile, the proportion of people working in the services sector rose from about 10% in 1952 to around 48% in 2019. [1 mark]. Services overtook both industry and agriculture to become the largest employment sector after 2010. [1 additional mark]
- Employment in industry grew more gradually from about 8% in 1952 to about 28% in 2019, as compared to the changes in the other two sectors. [1 mark]

- (e) Using Resource 3, explain how BYD's sales and manufacturing plants show interdependence between places in the global economy. [5]

Award 1 mark for every explanation on how BYD's sales and manufacturing plants show interdependence between places in the global economy.

Award maximum 1 additional mark for further development of every explanation.

Possible responses include:

- Resource 3 shows the interdependence between places where BYD's battery and **electric bus plants** are manufactured since the latter requires **batteries** as a **component goods**. [1 mark] For instance, the **electric bus plants** in Newmarket, Canada and Lancaster, US, are likely to be dependent on the **battery plants** in the Antofagasta region in Chile and Camarici in Brazil for batteries. [1 additional mark]
- Resource 3 also shows the location of BYD's **assembly plants** in countries like Thailand, Uzbekistan and Brazil (Camarici) where **component parts** produced elsewhere such as batteries in Hungary (Komaron/Fot), tires and engines are assembled into the final product. [1 mark] This illustrates the interdependence between locations which provide the lowly-skilled labour for assembly-line work and places where more highly-skilled work is conducted. [1 additional mark]
- Although the various manufacturing and assembly plants are located in specific places, BYD's products are **distributed and sold** to consumer markets across various regions, demonstrating how these consumer markets are dependent on these manufacturing bases. [1 mark]. As seen from Resource 3, the sales of more than 1,000 units in countries like Australia, South America, Southeast Asia, and Europe, and over 4 million units in China, are dependent on the regions where BYD's electric vehicles are produced. [1 additional mark]

(f) Explain how TNCs can impact progress towards sustainable development in host economies.

[6]

Award 1 mark for every explanation on how TNCs can impact progress towards sustainable development in host economies.

Award maximum 1 additional mark for further development of every explanation.

Possible responses include:

- As TNCs set up parts of their production processes in the host economies, they can promote social sustainability and **intragenerational equity** by creating jobs for locals. [1 mark] This often results in a **steady** and higher income for locals who can then afford goods and services which meet their basic **needs**. [1 additional mark]
- However, while TNCs bring about foreign direct investments into their host economies, they can result in **trade-offs** such as outcompeting local firms. [1 mark] These local business owners and their employees are driven out of work because local firms cannot afford to price their goods and services as cheaply as TNCs, resulting in eventual revenue loss. [1 additional mark]
- TNC operations in host economies may also lead to often **irreversible environmental degradation** as they exploit weak environmental regulations in host countries. [1 mark] This can have other **spillover effects** in other dimensions of sustainable development such as the health and livelihoods of local communities when such environmental destruction affect their sources of food as well as their access to clean drinking water. [1 additional mark] OR This will affect the ecosystem services which future generations can extract from the environment. [1 additional mark]

Cluster 2: Tropical Environments

- 2 Resource 4 shows the climographs of two Indian cities, Mumbai and New Delhi. Resource 5 shows the rainfall in the Indian subcontinent from May through October. Resource 6 shows a section of the Brahmaputra River.

(a) Compare the climatic characteristics of the two Indian cities shown in Resource 4. [5]

Award 1 mark for each comparison of climatic characteristics, to a maximum of 5 marks.

Award 1 additional mark for further development of each comparison, where applicable. Award maximum of 3 marks for explanation of either temperature or rainfall.

Possible responses include:

- Both Mumbai and New Delhi experience high annual average temperatures of above 30°C [1 mark]
- Mumbai has a smaller temperature range (29°C–33°C), while New Delhi shows a larger range (20°C–40°C), indicating more seasonal variation. [1 mark]
- Both cities experience their highest temperatures in May. [1 mark]
- Mumbai has higher total annual rainfall of about 2235mm compared to New Delhi's 755mm.
- Both cities receive most of their rainfall during the June to September monsoon season. [1 mark]
- Mumbai receives much higher rainfall, peaking at over 700 mm in July, compared to New Delhi's peak of about 230 mm.[1 mark]
- Both cities have a dry season from October to May. [1 mark] However Mumbai's dry period is longer and drier, with no rainfall between January to April, while Mumbai still gets low rainfall during this period. [1 additional mark]

(b) Cite data from Resource 5 to describe the rainfall distribution in the Indian subcontinent from May through October. [5]

Award 1 mark for each description of rainfall distribution, to a maximum of 5 marks.

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

Possible responses include:

- Most of Indian subcontinent receives significant rainfall of 500-1000mm and more from May through October. [1 mark]
- Rainfall generally decreases from coastal areas to inland areas. [1 mark]
- The western coast of India (e.g., Mumbai, Western Ghats), northeastern India (e.g., Kolkata) as well as Bhutan, Nepal and Bangladesh receive the highest rainfall, over 1000 mm during this period [1 mark]
- Rainfall is also generally very high (over 1000mm) along the Himalayas mountains though it is much further inland [1 mark]
- Northwestern India (around 250km west of New Delhi) as well as Pakistan generally receive the lowest rainfall under 125mm. [1 mark]

- (c) With reference to Resource 5, explain how the monsoon circulation affects the rainfall patterns in the Indian subcontinent from May through October. [6]

Award 1 mark for each explanation of monsoon circulation accounting for rainfall patterns, to a maximum of 6 marks.

Award 1 additional mark for further development of each explanation, where applicable.

Possible responses include:

- During summer in the Northern Hemisphere, the land heats up faster than the ocean, creating a low-pressure area over the Indian subcontinent and a high-pressure area over the Indian Ocean.[1 mark] This pressure difference causes moist air from the Indian Ocean to flow towards the landmass of the Indian subcontinent, bringing wet monsoon winds from the southwest as seen in the Resource.[1 additional mark]
- When the moist monsoon winds from the Arabian Sea reach the Western Ghats, they are forced to rise over the mountains.[1 mark] As the air rises, it cools, and the moisture condenses to form clouds and rain — a process known as orographic rainfall, which results in heavy rainfall (over 1000 mm) along the west coast.[1 additional mark]
- Regions in the northwest of the Indian subcontinent like Pakistan receive lesser rainfall (under 249 mm), as winds lose moisture as they travel further inland.[1 mark]
- Central India receives moderate rainfall (250–1000 mm), as the monsoon winds still carry moisture but with less intensity further from the coast.[1 mark]

- (d) Distinguish between infiltration and throughflow in a drainage basin system. [4]

Award 1 mark for each distinction between infiltration and throughflow, to a maximum of 4 marks. Award a maximum of 1 additional mark for further development of each distinction, where applicable.

Possible responses include:

- Direction of Movement: Infiltration is a vertical movement where water moves from the ground surface into the soil while throughflow is a lateral movement where water moves downslope within the soil. [1 mark]
- Location: Infiltration happens at the soil surface while throughflow happens beneath the surface, often above an impermeable layer. [1 mark]
- Water Pathway: Infiltration contributes water into soil storage while throughflow transfers water towards rivers/streams into channel storage. [1 mark]
- Speed of Movement: Infiltration can be rapid during light/moderate rain on permeable soils while throughflow is generally slower and more prolonged. [1 mark]

(e) Describe the channel characteristics of the Brahmaputra River as shown in Resource 6. [4]

Award 1 mark for each description of channel characteristics, to a maximum of 4 marks.

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

Possible responses include:

- The river shows a braided pattern, with multiple interwoven channels [1 mark]
- The presence of numerous interconnected streams and deposits in the middle of these streams suggest the channels are unstable and constantly shifting [1 mark]
- There are numerous mid channel bars within the river as shown in the resource [1 mark] This indicates high sediment load and variable water flow. [1 additional mark]
- The river channel is extremely wide, spreading across a large area [1 mark]
- The river is flowing across an area with steep gradient, as indicated in the resource which looks like a region with high altitude. [1 mark]

(f) Suggest how human factors can influence fluvial processes in rivers. [6]

Award 1 mark for each description of channel characteristics, to a maximum of 6 marks.

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

Possible responses include:

- Construction of dams trap sediment upstream, reducing the sediment flow downstream. [1 mark] This sediment reduction causes increased erosion of the riverbed and banks downstream due to greater velocity of the river, affecting the channel patterns. [1 additional mark]
- Deforestation increases soil erosion, as there are fewer roots to hold the soil in place. [1 mark] This leads to more sediment entering the river, which can increase deposition within the river due to reduced channel efficiency. [1 additional mark]
- Development along riverbanks can increase channel flow due to impermeable surfaces that increase overland flow. [1 mark] This can increase fluvial erosion and transportation of sediments due to increased capacity of the river. [1 additional mark]

Section B

Answer **either** Question 3 **or** Question 4 and answer **either** Question 5 **or** Question 6.

Cluster 1: Development, Economy and Environment

3 'It is challenging to manage conflicts over transboundary water resources.'

[20]

Evaluate this statement.

Possible Approaches:

Candidates could approach the question by making a judgement on whether it is challenging to manage conflicts over transboundary water resources through consideration of two or more case studies. Candidates could evaluate whether the strategies in each case study have met their intended aims or not, and from there, uncover the key reasons why it was challenging or not. Candidates could analyse the contextual factors such as lack of international cooperation amongst the riparian states, uneven power relationships between the riparian states and differing needs and interests, that make it more challenging in certain cases than others.

Candidates could approach the question by making a judgement on whether it is challenging to manage conflicts over transboundary water resources through a consideration of criteria such as (in)ability to address the root causes of conflict and (in)ability to call for all riparian states to work together to resolve the conflict. The analysis should be substantiated with relevant examples that showcase how the challenges have either undermined efforts to manage the conflicts effectively or can be overcome. In so doing, the response will offer a balanced evaluation of the given statement, and how the validity of the statement is ultimately context dependent.

Levels marked using Generic Level Descriptors for H2 essays

4 Evaluate the influence of multilateral institutions in shaping the global economy.

[20]

Possible Approaches:

Candidates could approach the question by making a judgement on whether multilateral institutions such as the World Bank, World Trade Organisation and ASEAN have a significant influence in shaping the global economy through a consideration of the relative significance of multilateral institutions vis-à-vis other actors such as states, labour and TNCs. Candidates could analyse the influence of multilateral institutions on TNCs and states through their role in promoting free trade amongst economies at a global and regional scale. Furthermore, candidates could also consider the role of multilateral institutions in supporting states in transitioning their economic structure to attract further inflows of trade, capital and labour.

Candidates could also approach the question by making a judgement on whether multilateral institutions have a greater influence in shaping the global economy in some contexts than others through a consideration of two or more case studies. Through these case studies, the analyses could uncover the successes or limitations that multilateral institutions have in influencing other actors and regulating the global economy.

Levels marked using Generic Level Descriptors for H2 essays

Cluster 2: Tropical Environments

5 'Strategies to manage fluvial floods are often unsuccessful.'

Evaluate this statement.

[20]

Possible Approaches:

Candidates could evaluate the effectiveness of different flood management strategies, both structural measures like dams, levees, and embankments, and non-structural measures such as flood forecasting and land use zoning. By assessing the limitations of these strategies—such as failure during extreme events or lack of effectiveness in enforcement—they can support the view that flood management is often unsuccessful, while also recognizing circumstances where these strategies have been effective.

Another approach is through the analysis of case studies of fluvial floods in different regions. Candidates could compare the severity and impacts of floods in places with different levels of preparedness, technology, and governance—for example, contrasting floods in developing countries with those in countries with advanced flood management systems. This would enable evaluation of how context influences the success or failure of flood management strategies, highlighting that success is not uniform and often depends on specific local factors.

Levels marked using Generic Level Descriptors for H2 essays

6 Evaluate the influence of human factors on the movement of materials on slopes.

[20]

Possible Approaches:

Candidates could approach the question by making a judgement on whether human factors are more significant than natural factors in influencing slope movement. Candidates could analyse human activities such as deforestation, construction, mining, and road building, which may destabilise slopes and directly trigger mass movements such as falls and slides vis a vis the influence of natural factors. They could also consider how poor land-use planning and inadequate slope management have increased the vulnerability of many slopes to mass movement.

Candidates could also approach the question by making a judgment on whether human factors have a greater influence in some contexts than others through a consideration of two or more case studies. Candidates could evaluate the relative significance of the different factors in each case study and analyse the interplay between the factors.

Levels marked using Generic Level Descriptors for H2 essays