HunGeoContest.org

17th Hungarian Geographical Contest 2025/26

2nd Round

Written Response Test

Question and Answer Booklet

12 December 2025

Password:

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Date of birth:

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Instructions for Students

1. Fill in your password and your date of birth on the front page of this **Question and Answer Booklet (QAB)** and also on the top of all pages.

2. The test consists of 6 sections, marked with letters A-F. You can find all the sources (maps, figures, photos, and tables) referred to in the **Source Booklet (SB).**

3. You can earn a total of **137 points.** Each section has a different maximum value:

A	23
B	24
C	23
D	25
E	24
F	18

4. All questions should be answered in the spaces provided in this booklet. **Only answers given in QAB will be accepted:** any answers written in the (SB) will be ignored. The backsides of the papers are available for notes and calculations, but NOT for answers. Any information on the backsides will not be considered throughout marking.

5. **Only the required number of answers** (reasons, examples, etc.) **will be accepted** in the order in which they are written. For instance, if the question asks for 2 reasons and you give more than 2, only the first 2 reasons will be marked.

6. Where appropriate, **write sentences or phrases, not single words.**

7. You might need a calculator, a ruler, crayons, and pencils during the test.

8. **You have a total of 180 minutes** to answer all questions.

Good luck!

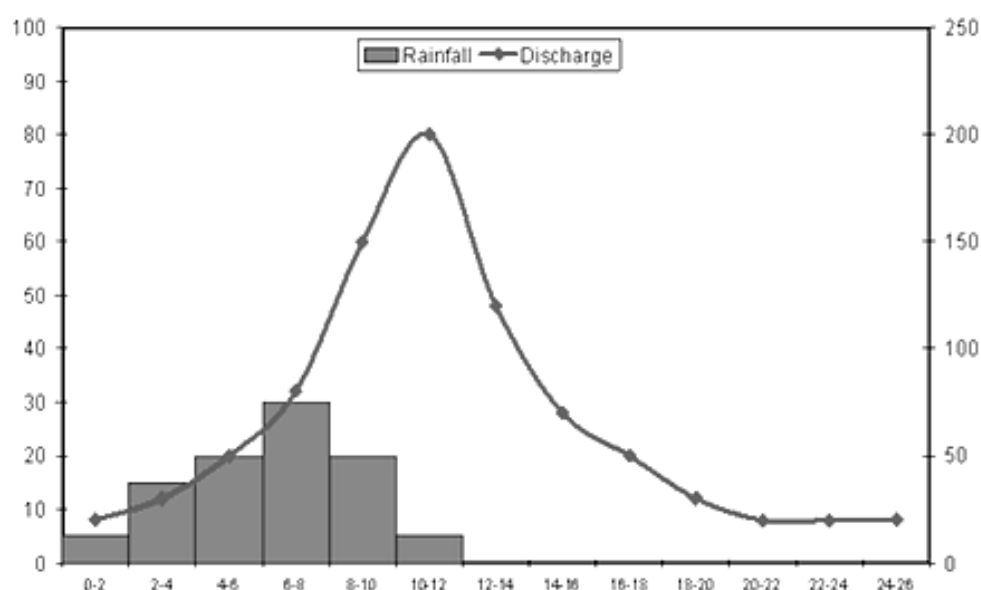# Section A: 'When the rain begins to fall'   [23 marks]

A.1. Study sources **A.1-5. in the Source Booklet (SB)**. Cloud formation is key in atmospheric processes that can subsequently contribute to precipitation and storm events. Name the processes that can contribute to cloud formation. [2.5 marks]

A.1.1.	
A.1.2.	
A.1.3.	
A.1.4.	
A.1.5.	

A.2. Storms can cause intense rainfall and flash floods in susceptible areas. Use the attached flood hydrograph to annotate the most important attributes of flood events and explain the terms listed below.

A.2.1. Annotate the following attributes to the chart below. [3.5 marks]

Peak discharge	Rising limb	Falling limb	Lag time
Base flow	Throughflow	Overland flow	

A.2.2. Define the following terms [3 marks]:

Base flow:

Throughflow:

Overland flow:

A.3.1. Outline the effects of urbanisation on flood hydrographs, make sure you explain your answers and sketch both the urbanised and natural graphs in your answer. [4 marks]

A.3.2. Identify three possible sustainable urban solutions that can be implemented to reduce the risks of flash floods and to restore the natural movement of water in stormy conditions. [3 marks]

A.4. Humanity has had to adapt to adverse weather conditions for a long time, which has led to some smart and empirical observations that were often true, yet could not be explained scientifically. Your task is to explain why the following pirate saying is generally true. Try to think of how weather is controlled in temperate areas, how it is related to air pressure conditions, the composition of air and the properties of sunlight. Consider this to be true in the northern hemisphere and explain your answer accordingly. [7 marks]

"Red sky at night, sailor's delight!
Red sky in the morning, sailors take warning!"

Section B: 'Hello darkness, my old friend'   [24 marks]

1. Use **SB B.1.** in this task. Match the cave types listed below with the pictures given in SB. You can use each picture only once. There is an additional row, which does not fit any of the sources or rocks. Please sign this with X. [3 marks]

	Cave types	Number of pictures
B.1.1.	Lava cave	
B.1.2.	Littoral cave	
B.1.3.	Loess cave	
B.1.4.	Karst cave	
B.1.5.	Ice cave	
B.1.6.	Sand cave	
B.1.7.	Talus cave	

1.2. Explain the genesis of these cave types shortly. The one which did not have any accurate pair in the previous task should be left empty. [6 marks]

B.1.1.

_____

B.1.2.

_____

B.1.3.

_____

B.1.4.

_____

B.1.5.

_____

B.1.6.

_____

B.1.7.

_____

B.2. Mammoth Cave

The Mammoth Cave, or more accurately the Mammoth–Flint Ridge Cave System in Kentucky, USA, is the longest known cave system in the world, with passageways of 686 km.

Read the text provided in SB B.2. It is about an early journey into the depths of the Mammoth Cave in the mid of the 19th century. The description contains many observations, which are important features of the caves' geomorphology and special environment.

B.2.1. List four geomorphological forms, which are typical in karst caves and are mentioned in the text. [2 marks]

2.1.1.

2.1.2.

2.1.3.

2.1.4.

B.2.2. Name two elements of the cave's environmental conditions, described in the text. [2 marks]

2.2.1.

2.2.2

B.2.3. There are hints for human utilisation of the caves; name two of them. [2 marks]

2.3.1.

2.3.2.

B.2.4. Look at the map provided in SB B.2.4. You can see the complexity of the Mammoth Cave system. Name three physical geographical conditions required for the formation of such a huge cave system. [3 marks]

2.4.1.

2.4.2.

2.4.3.

B.3. Caves and visitors

Since the very beginning of the literature, a journey under the Earth's surface, often associated with the underworld, is one of the hardest tasks a hero could have. Today, visiting a cave is not necessarily a lethal challenge.

B.3.1. Study map SB B.3. There are huge differences in the number of show caves around the world. Name four possible reasons for the given pattern. [4 marks]

3.1.1.

3.1.2.

3.1.3.

3.1.4.

B.3.2. Sustainability is an issue in the case of caves, too. Name two possible threats to the caves caused by tourism! [2 marks]

3.2.1.

3.2.2.

Section C: 'I'm an alien. I'm an evil alien.'   [23 marks]

C.1. Biological invasions are one of the top five drivers of global biodiversity loss, contributing to 60% of global extinctions and causing damages worth $ 423 billion per year.

C.1.1. Name two of the four other top drivers of global biodiversity loss. [2 marks]	

C.1.2. Outline one way invasive species can negatively impact each of the following (one answer/category). [3 marks]:	
Human health	
Food systems	
Native species	

C.1.3. Name and justify one potential reason why the number of invasive species detected has been steeply rising in the past 100 years. [2 marks]

C.2. Map C.2. in SB shows the global distribution of established alien species, including invasive species and introduced species with the potential to become invasive.

Based on the map and your own knowledge, describe two trends in the recorded global distribution of established alien/invasive species. [4 marks]

C.3. Biological invasions have reached almost all corners of the world, with a range of introduction pathways and effects on ecosystems. Match the short descriptions of specific invasion „stories" with their numbered locations on SB C.3.1., and the letters of the pictures in SB C.3.2. of the „guilty" invasive species in question! [5 marks]

Description	Location (number)	Species (Letter)
Originally starting as a population of only four individuals on the private property of one of the country's most (in)famous personalities, this species has considerably expanded its range along the country's river courses since its introduction. The climate of the new environment lacks the droughts typical of its native habitat, allowing the population to breed and spread unusually rapidly. Negative impacts include erosion of riverbanks, fragmentation of native forests, and threats to the country's native plant communities, which are ranked among the world's top five most biodiverse.		
This invasion stems from intentional release by humans: the species was introduced as a biocontrol agent against cane beetles, which are pests of one of the country's primary crops: sugarcane. There is no evidence that the species reduced cane beetle populations. Instead, it had severe ecological impacts, posing harm to native predators and displacing local species.		
This invader has altered the fire regimes of a naturally dry region characterised by high plateaus, rain-shadow deserts, and mountain ranges. Continuously "fuelling the fires", it has shortened the natural fire-return interval, increasing both the frequency and extent of wildfires affecting the region and threatening rural communities, traditional rangeland use, and native wildlife.		
This invasive species is believed to have arrived in a cargo of pottery from China around 20 years ago and has spread rapidly from its introduction site over the next two decades. The invasion is particularly costly in affected countries, as it damages agriculture by reducing pollination services and honey production, while also posing a threat to human activities.		
Introduced purposefully to combat desertification in this arid region marked by seasonal rivers, this species is now spreading uncontrollably. It depletes the region's scarce water sources, reduces access to grazing lands and water points, and obstructs movement for pastoral communities. It is particularly problematic in areas where livestock herding is a major source of livelihood and where prolonged drought cycles shape both the landscape and human activities.		

C.4. In total, invasive species have driven more than 1,200 documented extinctions around the world. The majority (90%) of these have occurred on islands.

C.4.1. Using map C.4. in SB and your own knowledge, identify three possible reasons why islands may be particularly hard-hit by biological invasions compared to mainland ecosystems. [3 marks]
1.
2.
3.
C.4.2. A small island's economy is highly dependent on agriculture and ecotourism. Outline two management strategies that could reduce the risk or impact of invasions and explain why those strategies might work in an island context. [4 marks]

Section D: 'Aruba, Jamaica, ooh, I wanna take you To Bermuda…' [25 marks]

It is beyond question whether small Caribbean islands are attractive. Scenic views and turquoise water, compared with golden beaches, make these places tourist paradises. Recently, it's not only the tourists who have an impact on these idyllic places, but also those who choose to live here permanently.

D.1. Population pyramids

D.1.1. Study Figures D.1. in SB. Which stage of the demographic transition model do these population pyramids represent? [1 mark]

D.1.2. Study the population pyramids. List three common demographic features of these countries. [3 marks]

D.1.3. There is one exception among these countries, which has one process that differs from the three others. [1 mark]

Which is this country?	
Which process differs from the other three?	

D.2. Migration trends

D.2.1. Study map D.2.1. and D.2.2. in SB. According to the sources, list three main reasons for immigration and emigration in the Caribbean islands listed here. [3 marks]

Immigration	Emigration

D.2.2. Here, you can read statements with justifications. Evaluate and decide on every statement and justification individually, whether they are correct or not. In case you find a correct statement with a false justification, you have to form a correct justification below. [8 marks]

	Statements		Justifications	
a	The population in the listed countries are ageing,		mainly because natural reproductive processes tend to this phenomenon.	

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	Statements		Justifications	
b	Immigrants of these islands have no impact on the local economy,		as their financial status does not differ from the local level.	
c	The reason for ageing in these countries is amenity migration,		which mainly includes wealthy senior people.	
d	Guadeloupe and Martinique could have faced economic challenges between the 1980s and 2000s,		as there is a clear lack of population born in this period.	
e	Life expectancy in these islands is relatively long,		thanks to the ideal climate conditions and quality services provided.	
f	Senior immigrants appear in higher volume in these islands,		while leisure services and idyllic tropical environments are very attractive.	

Add your corrections here:

D.3. Amenity migration

D.3.1. Study sources D.3. in the SB. In some regions, amenity migration has become one of the main types of migration in recent decades. Based on the sources, give your definition of amenity migration. [1 marks]

D.3.2. Name possible forms of conflicts related to amenity migration in the given territories. Find at least four. [2 marks]

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| |

D.3.3. Based on the sources and your knowledge, discuss the advantages and disadvantages of amenity migration on these Caribbean islands. Include three of each. [6 marks]

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Section E: 'We could've gone all the way to the Great Wall of China' [24 marks]

Welcome, analyst. Your mission is to travel along the 21st-century Silk Road. The ancient Silk Road was not just a path for trade but also for the flow of knowledge, ideas, and cultures. China's new „Belt and Road Initiative" (BRI) aims to reconnect Asia, Europe, and Africa along the lines of 21st-century challenges and opportunities.

In this task, you must investigate how this massive geopolitical and economic undertaking is changing the physical landscapes and human societies of the Earth across continents, ports, and mountain ranges.

E.1. Identify the country or city that matches each description, using SB E.1-2-3., and your geographical knowledge. [4 marks]	Name of country or city
This city is located in a South Asian nation that is developing a major deep-sea port on the Arabian Sea. This port is the key endpoint of the „China-Pakistan Economic Corridor".	
In this East African country, the new railway connects the state's main port (Mombasa) with its capital.	
This historic city is depicted as a northern terminus for the „New Maritime Silk Road" in the Adriatic Sea. It serves as a gateway for goods entering Central Europe via the Mediterranean route.	
An EU member state, shown on the Resource A map, functions as a key entry point for the „New Maritime Silk Road" into Southern Europe. Although its direct FDI from China listed in Resource B is relatively small, this country is famously home to the Port of Piraeus, where a Chinese company acquired a majority stake, turning it into their major Mediterranean hub.	
This vast, landlocked Central Asian country serves as the primary energy and transit hub for the „Silk Road Economic Belt". According to the map, it is the only nation traversed by all three major infrastructure types: railroads, oil pipelines, and gas pipelines.	
Located at the heart of Central Asia, this double-landlocked country is indicated on the map by the industrial city of "Angren". The rail infrastructure is critical for unifying the region's fragmented transport network and connecting the "Silk Road Economic Belt" to routes further south.	
A landlocked Southeast Asian country, which was linked to the Chinese railway network, was to create a connection between Shanghai and Singapore.	
A capital city that gains a new high-speed rail connection with the country's largest metropolitan region, including a link between the European and Asian continents.	

E.2. Investment, trade, and resources. Study SB E.2.

E.2.1. Calculate and analyse the changes in realised FDI value for all countries/regions between 2015 and 2022 using the key metrics provided below. Please add the formula you have used for your calculations.

Add the formulas here. [2 marks]

Changes in the number of companies	FDI value pro company (2022)	Absolute increase	Percentage increase

Add your results to the table below. [4 marks]

Country/Region	Value			
	Changes in the number of companies	FDI Value pro company (2022)	Absolute Increase	Percentage increase
Hong Kong, China				
Indonesia				
Malaysia				
The Philippines				
Singapore				
Republic of Korea				
Taiwan				
United Kingdom				
Germany				
France				
Spain				
Sweden				

E.2.2. Mapping: Based on your calculations, visualise the data in the map below. Sketch a cartogram that depicts your findings using all the available data. [6 marks]

E.2.3. Evaluate your findings and specify the types of countries based on the map and your data. Add one example to each category. [4 marks]

E.2.4. Discuss the effects of FDI in the recipient countries. What are the positive and negative effects of investments from China? List and explain two of each. [4 marks]

Section F: 'I get a little bit Genghis Khan'   [18 marks]

This task will lead you to one of the world's most extraordinary countries, with living nomadic traditions and endless landscapes.

F.1. Transport Infrastructure

Figure F.1. in SB compares the road infrastructure per capita in Ulaanbaatar to the national average. In 2021, Ulaanbaatar had about 662,644 registered vehicles for a population of roughly 1.5 million. Use these data to figure out the following. [2 marks]

F.1.1. Vehicle density: Calculate the number of vehicles per 1,000 people in Ulaanbaatar.	
F.1.2. Road length estimate: Using Fig.1, estimate the total length of roads in Ulaanbaatar in km.	

Make your calculations here!

F.1.3. What is the reason behind the large gap between the figures of the capital city and the rest of the country? [1 mark]

F.1.4. Briefly discuss one major urban challenge that results from the combination of many vehicles and limited road infrastructure in Ulaanbaatar. [3 marks]

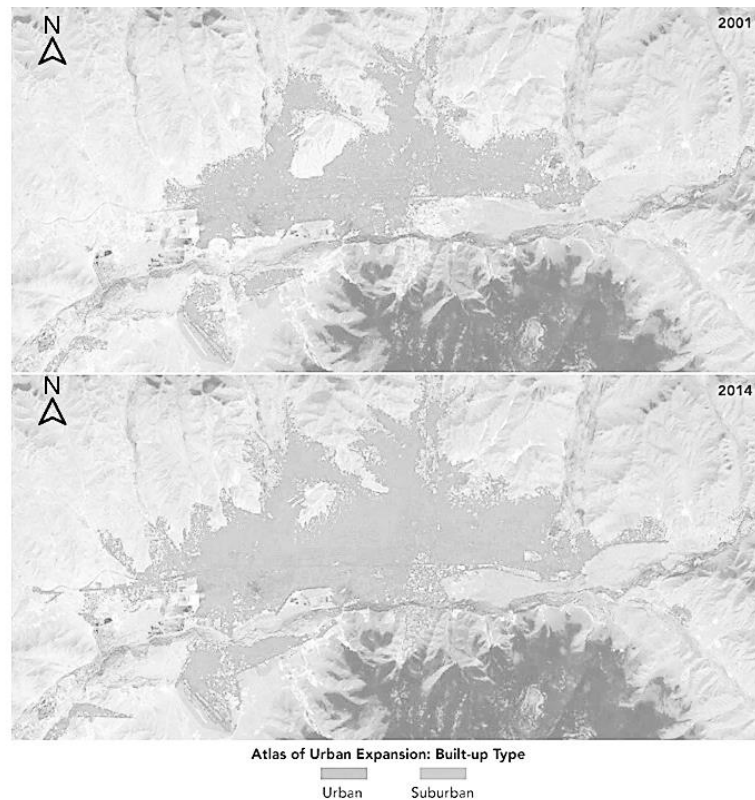**F.2. Urban Fabric and Development Challenges**

Study SB at F.2.1 and F.2.2. Think about the major challenges that arise from the coexistence of these two urban forms – the traditional informal settlements and the planned city. Name two infrastructural, two social and two environmental challenges, and give the most important characteristics of each. [6 marks]

F.2.1.1.	
F.2.1.2.	
F.2.1.3.	
F.2.1.4.	
F.2.1.5.	
F.2.1.6.	

F.3. Urban growth in Ulaanbaatar

F.3.1. Study the graph and map provided in SB F.3.2. Indicate two areas on the map where the city expanded between 2001 and 2014. (Do it here, but a colour map is available in the SB!) [2 marks]

Atlas of Urban Expansion: Built-up Type
Urban   Suburban

F.3.2. Give two possible reasons why those directions were suitable for expansion. [2 marks]

3.2.1.
3.2.2.

F.3.3. Name two challenges that come from this kind of outward urban growth. [2 marks]

3.3.1.
3.3.2.

THE END