

# Questions

7<sup>th</sup> International Geography Olympiad

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## Instructions for the students

1. This test consists of seven assignments.
2. The maximum total mark is 80:

1 International tourism	14 marks
2 Climate & climate change (global warming)	12 marks
3 Bogotá (Colombia)	11 marks
4 Energy and sustainability	13 marks
5 Pot-in-pot system	10 marks
6 Climates of China	10 marks
7 Food problems	10 marks
3. Give only the required number of answers (reasons, examples, et cetera). For instance, if the question asks for two reasons and you give more than two, only the first two reasons will be marked.
4. Answer all questions on your answer sheets or worksheets.  
**Use for each assignment (1 - 7) a new answer sheet.**
5. **Write your name and country on each of the seven answer sheets and the two worksheets.**
6. The sources booklet contains the maps and figures referred to in the questions. Please be aware that different countries use different number conventions. In the sources, Parts 1, 4 and 6 show a decimal point as a [.] , e.g. 24.6, and divide numbers into 3s with a [,] , e.g. 1,500. Whereas the sources for Part 3 show the decimal point as a [,] , e.g. 24,6, and divide numbers into 3s with a [.] , e.g. 1.500.
7. Time: **180 minutes for native English speakers**  
**Attention: non-native English speakers are allowed an additional 30 minutes for the test.**
8. Non-native English speakers are allowed to use bilingual dictionaries during the test.
9. You may use a calculator during the test.

**Good luck!**

# 1 International tourism

*Write your name and country on your answer sheet and on worksheet 1.*

*See source 1 part 1 in the sources booklet.*

- 1a** 4m Comment on the real and anticipated changes in international tourism, both regionally and world-wide, from 1950 to 2020, and suggest **three** reasons for these changes on the **global** scale.
- 1b** 2m Give **two** reasons why international tourism might **NOT** grow as much as expected.
- 2** 2m Describe the spatial distribution of the world's Top 10 Tourism Destinations (source 2) and give **one** possible reason for this distribution.
- 3** 2m Which countries had a higher or lower Top 10 Tourism Destinations rank in 2006 than they did in 2003? Suggest **two** reasons for these changes.
- 4** 4m What are some of the positive and negative impacts of international tourism? Fill in **one impact in each cell** of Table 1 on worksheet 1.

## 2 Climate & climate change (global warming)

*Write your name and country on your answer sheet and on worksheet 2.*

*Study the source material in the sources booklet: 1- map of Arctic*

- 1 1m Lines 1 and 2 in source 1 demarcate ecosystems.  
What is the name of the ecosystem between the two lines?
- 2a 1m The so-called Cold Pole is the place where the lowest winter temperatures in the Northern Hemisphere are measured. **Mark on the map on worksheet 2** where the Cold Pole is located.
- 2b 1m What is the lowest temperature ever recorded there in degrees Fahrenheit or Celsius?
- 2c 2m Give (besides the northerly location) **two** causes for these very harsh climatic conditions.
- 3 1m How are the decrease in Arctic ice cover and the Gulf Stream (North Atlantic Drift) interlinked?
- 4 3m Name **two** mammal species in the Arctic region which are threatened by global warming. Explain how they are threatened.
- 5 2m Name **two** positive side effects of the decrease in Arctic ice.
- 6 1m Name **one** political consequence **for the Arctic region** of the decrease in **Arctic ice**.

### 3 Bogotá (Colombia)

*Write your name and country on your answer sheet.*

*Study the source material in the sources booklet.*

- 1 2m Why is the old town centre (source 3: built-up area until 1790) located at the eastern fringe (edge) of modern Bogotá and not in the geographical centre of the city?
- 2 2m Source 2 shows the population growth of Bogotá. Much of that growth was a result of rural-urban migration in Colombia. Was this influence of more importance in Bogotá before or after 1985? Which data in source 2 show this clearly?
- 3 2m The city of Bogotá shows a clear social structure: the rich North and the poor South. (source 1)  
Write on your answer sheet the letters corresponding to all possible reasons for this strong contrast.
  - a) the climate
  - b) the relief
  - c) the location of the industry
  - d) the railway lines
  - e) the distribution of forests and recreational areas
- 4 3m Source 1 shows that the former Central Business District (CBD) was located in the old city centre whereas the new CBD is in the North of Bogotá.  
Give **three** reasons for this shift.
- 5 2m According to source 1 there is one area of very low socio-economic status and a nearby partly dangerous neighbourhood in the Northern half of Bogotá. Explain their location.

## 4 Energy futures and sustainability

*Write your name and country on your answer sheet.*

*Study the source material in the sources booklet.*

*Using the material provided below, answer the multiple choice questions 1, 2 and 3, then respond to questions 4, 5 and 6.*

Energy from renewable sources is regarded as an important contributor to sustainable development. Different places have different distributions of natural resources suitable for energy generation, and different patterns of human activity in different countries lead to different patterns of energy consumption per capita.

*Please answer the three multiple choice questions by writing the number of the right alternative, 1, 2, 3 or 4 on your answer sheet.*

- 1 1m In terms of energy supply, the mature industrial economies shown in source 1:
1. have uniform sources and patterns of energy generation,
  2. are heavily dependent (more than 2/3 of energy supply) on non renewable fuels alone,
  3. use a significant amount (more than 1/5 of energy supply) from nuclear energy sources,
  4. have exploited renewable hydro-electricity extensively (more than 1/5 of energy supply).
- 2 1m With reference to renewable energy (source 2), which of the following statements is **NOT** true:
1. the technologies of hydroelectricity generation are well known, but further development is dependent on reliable runoff and suitable dam sites,
  2. new technologies like wind power generation have appeared and grown rapidly in generation capacity partly as a consequence of the limited supply and high price of fossil fuels,
  3. geothermal options, using steam driven turbines to generate electricity, are widely available geographically, with the potential to provide 15% of global energy needs in the next 10 years,
  4. 'Bio-fuels' like ethanol additives can complement oil-based energy, but large scale conversion of croplands to grow fuel feed-stocks may threaten existing food supply.

- 3 1m The geographical patterns of global oil use per capita are distinct (source 4).  
They show
1. mature industrial countries in temperate latitudes are the only major users of oil,
  2. more than half the world's population have oil use figures per capita that are in the lowest two levels of oil consumption,
  3. only countries that have high levels of oil production have high levels of oil consumption per capita,
  4. as emerging economies, China and India have higher levels of consumption per capita than countries in South America.
- 4 3m Explain how the global distribution of natural resources contributes to differential patterns of sustainable energy generation.
- 5 3m Using source 4, provide an analysis of the global patterns of energy use as indicated in the distribution of oil consumption per capita.
- 6 4m Coal and oil provided the fossil-fuel energy drivers of industrial economies since 1780. Hydro power has been used as a renewable energy supply for industry for about 100 years. Biomass, although controversial, will fuel vehicles.  
Write a paragraph (**between 100-200 words**) about wind and geothermal generation as renewable sources of industrial energy supply.



## 5 Pot-in-pot system

*Write your name and country on your answer sheet.*

*Study the source material in the sources booklet.*

The climatic problems in many developing countries have long threatened the establishment of sustainable agriculture in rural regions.

- 1a** 1m In which climate zone is Northern Nigeria situated?
- 1b** 1m Which major climatic characteristic causes food to be spoiled in Northern Nigeria?

*See source 1*

- 2** 1m Describe why the pot-in-pot device is particularly efficient in overcoming the food spoilage problem in such climatic conditions.

*See sources 1 and 2.*

- 3** 4m Illustrate with **four** arguments why the pot-in-pot device is such a successful concept in regions like Northern Nigeria.

*See the introductory paragraphs and sources 1 and 2.*

Benefiting from Mohammed Bah Abba's project, farmers sell products on demand nowadays and family income level rises noticeably in the communities where the pot-in-pot device has been widely adopted.

- 4** 3m In addition to the economic effect, describe **three** positive impacts of this project on societal aspects of the rural communities.

## 6            **Climates of China and the Olympic Games**

*Write your name and country on your answer sheet.*

*Study the source material in the sources booklet.*

- 1    4m    Write the letters A, B, D and E of the climate diagrams in source 1 on your answer sheet and put the right city beside each letter. The climate diagram of Beijing (C) can be used as a reference. Choose from the following cities:
- Guangzhou
  - Lhasa
  - Shanghai
  - Urumqi
- 2    1m    Which proposition concerning Beijing is wrong? Write the number of the **WRONG** proposition on your answer sheet.
1. The hot, humid, summers are due to the East Asian monsoon and the cold, windy, dry winters reflect the influence of the vast Siberian anticyclone.
  2. The surrounding hills and low wind speeds restrict venting of pollution, which build up over several days until dispersed by wind or removed by rain.
  3. Erosion of deserts in southern and southwestern China results in seasonal dust storms that plague the city.
  4. Hong Kong has similar weather conditions in summer and so is an ideal place to serve as a pre-olympic base for overseas sports teams to acclimatize themselves.
- 3    2m    Photographs 1 and 2 in source 3 were taken in the vicinity of two cities. Write the figures 1 and 2 of the photographs on your answer sheet and put the right city from the list below beside each figure.
- Beijing
  - Guangzhou
  - Lhasa
  - Shanghai
  - Urumqi

*See source 4.*

- 4 2m If all visitors to the Olympic Games (2.500.000) could use the new toilets (3 times a day) during a two-week stay, approximately how much water in m<sup>3</sup> would be saved?
- 5 1m If only climatological conditions are considered, which city would be a better location than Beijing for a summer Olympics?
1. Guangzhou
  2. Lhasa
  3. Shanghai
  4. Urumqi

Playing sport in Beijing might be difficult because of hot climate conditions in August and air pollution (smog). For dealing with these problems there are some possible solutions.

- 6 1m Which solution is **NOT** an option for the Beijing Olympics?
1. Reschedule some endurance events.
  2. Reduce the number of (polluting) vehicles on the streets.
  3. Produce enough solar power on top of Olympic installations to close a number of power plants.
  4. Shoot canisters, containing silver iodide or dry ice, into the sky to create rain.

## 7 Food problems

*Write your name and country on the answer sheet.*

*Study the source material in the sources booklet.*

*See source 1.*

- 1 2m Describe the features of diets in the countries where the supply of nourishment is over 3000 kcal (kilocalories).

*See source 2.*

- 2 1m For what reason has the supply of nutrition from 1970 to 2001 increased more, for example, in the Arab Maghreb Union than in Developed Countries?

- 3 2m From source 2, you may understand the supply of nutrition has increased because of the Green Revolution in South Asia. Although that revolution has contributed to the increase in the food harvest in this area, it has helped broaden the gap between people with high and people with low socio-economic status in the agricultural sector. Explain the reason for this broadening of the gap.

*See source 3.*

- 4 3m Give **three** reasons (besides the Green Revolution) why the production of food remains at a low level in Africa.
- 5 2m Concerning food production and population, describe the differences between Europe and North & Central America on the one side, and Asia, China and South America on the other side.