INSTRUCTIONS

A After you have completed this examination paper, you should hand in the following:
   • This examination paper
   • The mark-reading sheet with your answers for Section A
   • Your examination book with your answers for Section B

B Make sure that your student number and all the other required information are entered on your examination book and mark-reading sheet. Where the module code is requested, write GGH1501.

C Note that the unique number of the examination paper for GGH1501 is 488470 (provided on the cover page of the examination paper, in brackets, following the module code). It is important that you write and mark this unique number on the mark-reading sheet.

D Allocation of marks:
   • Section A — 60 marks (44 multiple choice questions: Answer all of them)
   • Section B — 40 marks (Select and answer 4 questions of 10 marks each)

E It is recommended that you utilise your time as follows:
   • Section A — Approximately 60 minutes
   • Section B — Approximately 60 minutes

F Read the instructions for each section and follow them carefully.

G Do your best, and good luck!

This examination paper consists of 19 pages.
SECTION A

Instructions
- Answer all the questions in this section.
- The questions in this section must be answered on a mark-reading sheet.
- Write your student number, the unique number of the examination paper and all other required information on the mark-reading sheet.
- Put the mark-reading sheet in the front of your examination book when handing in everything at the end of the examination.

Questions

The nature of geography and geographical thinking

1. In geographical terms, “situation”, can be defined as … .
   (1) a region on Earth
   (2) a certain time zone allocated to an area
   (3) the physical character of a place
   (4) the location of a place relative to other places
   (5) the absolute location of a place

2. Which one of the following sets of properties is used by geographers to describe the spatial distribution of phenomena?
   (1) density, concentration and pattern
   (2) diffusion, distance decay and connection
   (3) length, width and depth
   (4) weight, mass and gravity
Figure 1: Maps showing spread of Euro in France

3. The series of maps provided in Figure 1 illustrates the process through which the Euro as currency spread through France. What is this process referred to?
   (1) spatial interaction
   (2) diffusion
   (3) distance decay
   (4) globalisation
   (5) regionalisation

4. Which one of the following alternatives does not represent one of the Earth’s four major physical spheres?
   (1) biosphere
   (2) atmosphere
   (3) noosphere
   (4) lithosphere
   (5) hydrosphere

5. A … is an area of the Earth which is distinguished by a unique combination of cultural and physical features.
   (1) place
   (2) society
   (3) country
   (4) region
   (5) state
6. The three basic concepts that geographers refer to when explaining the interrelatedness between places are … .
   (1) scale, space and connection
   (2) country, region and town
   (3) railroads, shops and markets
   (4) distance, area and location
   (5) maps, GPS and GIS

Key processes of the physical environment

7. Which one of the following statements describing the position of the Sun in June every year is true?
   (1) The Sun will be directly above the Equator.
   (2) The Sun will be directly above the Tropic of Cancer.
   (3) The Sun will be directly above the Tropic of Capricorn.
   (4) The Sun will be directly above 40° North Latitude.
   (5) The Sun will be directly over the North Pole.

8. The circulation change in the eastern tropical Pacific Ocean that occurs every few years is referred to as … .
   (1) El Niño
   (2) a tsunami
   (3) the trade winds
   (4) global warming
   (5) the intertropical convergence phenomenon

9. The prominent belt of high pressure cells located in the subtropical latitudes in winter in the Southern Hemisphere is characterised by … .
   (1) converging winds and rising air
   (2) frontal conditions leading to rainfall
   (3) diverging winds and sinking air
   (4) intense rainfall due to convection
   (5) surface winds blowing from east to west
10. A **convergent plate boundary** is a boundary between tectonic plates in which the two plates … .
   (1) move towards one another, destroying or thickening the crust
   (2) move towards one another, creating or thinning the crust
   (3) move away from one another, creating or thinning the crust
   (4) pass one another in a direction parallel to the plate boundary

11. The mechanical and chemical process whereby rocks break into pieces ranging in size from boulders to pebbles, sand grains and silt, down to microscopic clay particles and dissolved solids is called … .
   (1) erosion
   (2) denudation
   (3) decomposition
   (4) soil degradation
   (5) weathering

12. Which **one** of the following statements **does not** represent an aspect of the nitrogen cycle?
   (1) Nitrogen fixation occurs in the soil by means of bacteria.
   (2) Today more nitrogen is fixed by humans than by natural processes.
   (3) Atmospheric nitrogen does not enter the nitrogen cycle.
   (4) Water moving through the soil carries soluble nitrogen to streams and the ocean.

13. A **biome** can most comprehensively be described as … .
   (1) an area where the annual averages of, as well as the seasonal variations in temperature and precipitation are similar
   (2) a community of living organisms who are as a system interacting with the non-living components of their environment
   (3) a linear network of links in a food web starting from producer organisms and ending at predator species, detritivores or decomposer species
   (4) a large grouping of ecosystems characterised by particular plant and animal types
Patterns and trends of the global population

14. Which one of the following statements based on the information about the CBR displayed on the world map in Figure 2, is not true?

(1) The CBR of countries in Africa are generally much higher than those of countries in Latin America.

(2) The CBR of India, China and Pakistan fall in the same category.

(3) Germany is an example of a country with a very low CBR.

(4) Most of the countries on the western side of South America have a higher CBR than the countries on the eastern side.

Figure 2: World map indicating the spatial pattern of the Crude Birth Rate (CBR)
15. Which **one** of the following statements referring to the phenomenon of overpopulation is **not** true?

(1) Overpopulation depends on the relationship between the number of people and the available resources.

(2) Overpopulation occurs when the number of people in an area exceeds the capacity of the environment to support life at a decent living standard.

(3) The arithmetic population density provides a better indication of overpopulation than the physiological or agricultural population density.

(4) Overpopulation is a problem associated with developing countries rather than with developed countries.

16. Two-thirds of the world’s people are concentrated together and live in four clusters, select the correct combination of these four clusters:

(1) Europe, East Asia, Southeast Asia and South Asia

(2) North America, Europe, Southeast Asia and South Asia

(3) Africa, Europe, East Asia and Southeast Asia

(4) West Asia, East Asia, Southeast Asia and South Asia

(5) North America, Latin America, Europe and Southeast Asia

17. Scientists generally agree that our early (hominid) ancestors evolved from an area in **…**.

(1) Central East Africa

(2) Central West Africa

(3) Central Europe

(4) close proximity to the Tigris and Euphrates Rivers

(5) the Nile Valley

18. **Internal migration** refers to people moving **…**.

(1) from one city to another city in different countries

(2) between different countries on the same continent

(3) between different countries in the same hemisphere

(4) from one to another part of the same country
19. Which **one** of the following statements concerning global migration patterns is **true**?

(1) Africa is experiencing a net in-migration of people.
(2) The flow of migrants from developing to developed countries is very obvious.
(3) Europe is experiencing a net out-migration of people.
(4) International migration has decreased considerably over the past decade.

**The global cultural mosaic**

20. Looking at Figure 3, in which **one** of the listed countries is English **neither** the official language **nor** the de facto language?

(1) India
(2) Canada
(3) South Africa
(4) Kenya
(5) Argentina

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**Figure 3:** English-speaking countries
21. Which one of the following alternatives represents the world’s most widely spoken language family?
   (1) Altaic family
   (2) Sino-Tibetan family
   (3) Dravidian family
   (4) Indo-European family
   (5) Niger-Congo family

22. In the first 100 years of its existence, the main way through which the Islam religion expanded and spread was … .
   (1) war
   (2) migration
   (3) revelation
   (4) crusades
   (5) trade

23. What are the two main elements of cultural diversity?
   (1) languages and culinary preferences
   (2) ethnic and universalising religions
   (3) churches and monuments
   (4) ethnicity and nationalism
   (5) languages and religions

24. What is the difference between a perforated state and a prorupted state?
   (1) A prorupted state has a circular shape while a perforated state has a long narrow shape.
   (2) A prorupted state has an elongated shape while a perforated state has a long circular shape.
   (3) A prorupted state is a compact state with a protruding extension while a perforated state has other state territories within its boundaries.
   (4) A prorupted state is a compact state with a protruding extension while a perforated state has two or more disconnected pieces of territory.
25. Physical features on the Earth’s surface make good boundaries as they are easily seen. Which one of the following alternatives does not represent a physical boundary?

(1) deserts
(2) oceans
(3) mountains
(4) latitude
(5) rivers

Making (and earning) a living

26. Looking at Figure 4, which one of the following countries has the highest HDI?

(1) India
(2) Algeria
(3) Bolivia
(4) Spain
(5) Mexico

Figure 4: World map indicating the spatial pattern of the Human Development Index (HDI)
27. Which one of the following alternatives is not characteristic of countries with a self-sufficiency approach to development?
   (1) reliance on trade with the outside world for survival
   (2) giving precedence to poverty reduction over a few people becoming wealthy consumers
   (3) spreading investment across all regions and all sectors of the economy
   (4) setting high taxes on imported goods
   (5) complex administrative systems that may lead to abuse and corruption

28. Which one of the following foods provides the bulk of the protein in most developing countries?
   (1) meat
   (2) soya
   (3) cereals
   (4) lentils
   (5) genetically modified cane sugar

29. In which one of the following regions is shifting cultivation a prominent form of agriculture?
   (1) South Asia
   (2) East Asia
   (3) Sub-Saharan Africa
   (4) North Africa
   (5) Central America

30. The shift of world manufacturing to new industrial regions can be seen most clearly in the manufacturing of … .
   (1) beverages
   (2) canned foods
   (3) pharmaceuticals
   (4) steel
   (5) pre-fab housing
31. Which one of the following alternatives is not one of the four main types of consumer services?
   (1) retail
   (2) education
   (3) health care
   (4) management
   (5) leisure and hospitality

32. Developing countries are inclined to specialise in … .
   (1) raw-material production and high finance
   (2) offshore financial services and back-office functions
   (3) high finance and transportation
   (4) transportation and manufacturing
   (5) medical tourism and banking

Resources: Use and abuse

33. A resource that is naturally produced at rates similar to its use by humans is referred to as a(n) … .
   (1) renewable resource
   (2) cultural resource
   (3) natural resource
   (4) human resource
   (5) economic resource

34. Natural resources acquire a monetary value through … .
   (1) legitimate elections and other political acts
   (2) the interest rates set by the central bank of a country
   (3) exchange in a marketplace
   (4) longevity in the culture
   (5) cultural diffusion
35. The ratio of oil reserves to annual production (R/P) is an indication of ….
   (1) how much oil each OPEC country is allowed to produce
   (2) how much oil countries are allowed to hold in reserve
   (3) the price per barrel as determined by the total output around the world
   (4) the number of years the known oil reserves will last
   (5) the effect of non-OPEC countries on total world oil production

36. … is a metal that has received considerable attention in recent years because of its use in batteries for cell phones, laptop computers, and hybrid and electric-powered vehicles.
   (1) Copper
   (2) Lithium
   (3) Gold
   (4) Platinum
   (5) Iron

37. The most acute water pollution problems in the world are associated with ….
   (1) runoff
   (2) floods
   (3) waste water
   (4) ocean currents
   (5) recycled water

38. … refers to the efficient use and careful management of resources to attain the maximum possible benefits from them.
   (1) Preservation
   (2) Exploitation
   (3) Sustainability
   (4) Mismanagement
   (5) Conservation
Geographical data: nature, sources and representation

39. The distance between Place C and Place D is 3.2 km, while these two places are situated 360 m and 680 m above sea level respectively. The average gradient between Place C and Place D is therefore … .
   (1) 1:10
   (2) 1: 3.2
   (3) 1:32
   (4) 10:1

40. A small scale is usually appropriate for a map of a relatively … of land and could have a ratio comparable to … .
   (1) small area; 1:100
   (2) large area; 1:250 000
   (3) small area; 1:250 000
   (4) large area; 1:100

41. The measured length of a swimming pool on a map is 3cm. What would the real length be if the scale of the map is 1:500?
   (1) 15 000 cm
   (2) 3000 m
   (3) 1500 mm
   (4) 15 m

42. In what format will each of the following features respectively be presented on maps: roads; police stations; lakes?
   (1) lines; points; polygons
   (2) polygons; lines; points
   (3) lines; points; points
   (4) points; polygons; lines
43. Which one of the following alternatives provides the most accurate absolute location of Miami? (Refer to Figure 5)
   (1) 80°10’ W and 25°30’N
   (2) west of the Atlantic ocean
   (3) 85°50’ W and 30°30’N
   (4) south of Washington, DC

44. An equidistant map projection means that the map … .
   (1) accurately represents direction
   (2) accurately represents distance
   (3) Accurately represents area
   (4) is not distorted at all

[Total of Section A: 60 marks]
SECTION B

Instructions
- This section consists of six (6) questions.
- You have to answer ANY FOUR (4) of these questions in your examination book.
- Length guideline:
  For 4 marks: About 6 to 8 written lines
  For 6 marks: About 10 to 12 written lines.

Questions

Question 1

1.1 Compare the two map excerpts of diversity of climate and biomes provided in Figure 6. Identify the climate and biome of Cape Town and explain how the temperature and rainfall of the area are linked to the vegetation.

Figure 6: Climate (top) and biome (bottom) maps of Southern Africa
1.2 List and very briefly discuss one situation and one site factor that would influence the decision on what location to choose to build a factory. (4)

*Tip: First write down the first factor, followed by its discussion. Then do the same for the second factor.*

**Question 2**

2.1 Consider the two population pyramids provided in Figure 7. Explain the demographic transition processes that will have to take place for the population structure of Country A to evolve to a structure similar to that of Country B. (6)

![Population pyramids](image)

**Figure 7:** Population pyramids
2.2 With reference to Figure 2 (p 6; World map indicating the spatial pattern of CBR) and Figure 4 (p 10; World map indicating the spatial pattern of HDI), briefly explain what is meant by spatial variation and spatial association.

Tips:
- For the explanation of spatial variation, use only one of the maps above.
- For the explanation of spatial association, use both maps.

Question 3
3.1 Explain the differences between a GIS and GPS, by referring to their functioning as well as typical application. (6)

3.2 According to the prescribed text book for GGH1501, the most important push and pull factors shaping global migration are economic in nature. Provide a short re-evaluation of this viewpoint in the light of recent migration trends, such as the number of illegal border crossings into the European Union that increased from 283 175 in 2014 to 1 822 260 in 2015.


Tip: “Re-evaluate” implies that you need to provide reasons why you agree or disagree with the viewpoint in your textbook, with reference to recent migration trends.

Question 4
4.1 Choose any universalising religion and then briefly explain the process by which this religion diffused from its specific place/s of origin to other regions of the world. Also very briefly comment on the current distribution of that particular religion in the world. (6)

Tips:
- First mention the universalising religion you have chosen.
- Then explain the process of its diffusion.
- Lastly mention its current distribution.

4.2 Explain in a short paragraph why errors will occur and what errors will occur when transferring a spherical object such as the Earth onto a flat surface, for example during the process of making a map of the world. (4)
Question 5
5.1 Briefly contrast the economic structures of developed and developing countries. (6)

5.2 Choose any two countries, each with a totally different state shape. For each country, firstly mention the shape of the state, followed by a very brief outline of either a political advantage or challenge associated with this shape. (4)

Question 6
6.1 Provide a short explanation of modern-day geographers’ use of spatial analysis as analytic method in their research about contemporary issues in the world. (6)

Tip: Use examples (at least two), to illustrate your answer.

6.2 Select ANY TWO of the following processes: photosynthesis, respiration, sedimentation or combustion. Then, for each of the two processes you selected, briefly explain their respective contributions to the biogeochemical cycling of carbon. (4)

[Total of Section B: 40]
[Total of Paper: 100]