

GGH1502 (475071)
GGH102R (488553)

May/June 2011

WORLD ISSUES: A GEOGRAPHICAL PERSPECTIVE

Duration 2 Hours

100 Marks

EXAMINERS
FIRST
SECOND

MRS R COETZEE
PROF SE MINI

This paper consists of 11 pages plus instructions for the use of a mark-reading sheet

IMPORTANT:

- A After answering this examination paper, you should hand in the following
- One mark-reading sheet for section A **Place the mark-reading sheet in the front of your examination book.**
 - Your examination book
- B Make sure that your student number and all the other required information are written on your examination book and on the mark-reading sheet. The unique number for the examination paper should be written and marked on the mark-reading sheet. If you are registered for module **GGH1502** the unique number is **475071**. If you are registered for module **GGH102R** the unique number is **488553**
- C Allocation of marks
- Section A 40 marks
 - Section B 60 marks
- D It is recommended that you use the available time as follows
- Section A (30 multiple-choice questions) 40 minutes Here it is of extreme importance not to spend too much time on any one of the questions $30 \times 1.22 = 40$ marks
 - Section B (four questions) 80 minutes
- E Read the instructions at the beginning of each section and follow them carefully

[TURN OVER]

SECTION A**Instructions:**

- Answer all the questions
- Mark your answers with a HB pencil on the mark-reading sheet supplied to you
- Remember to enter your student number and the unique number of the examination paper on the mark-reading sheet

Questions:

1 Which **two** of the following statements about desertification are **true**?

- (a) Desertification occurs only in southern Africa
- (b) It can be reversed with appropriate agricultural techniques
- (c) Desertification refers to the inability of the soil to maintain its earlier levels of biomass production
- (d) It is only limited to the arid regions of the world
- (e) It is always attributable to natural causes

The **correct** combination of alternatives is

- (1) (a) and (b)
- (2) (a) and (c)
- (3) (a) and (d)
- (4) (b) and (c)
- (5) (c) and (d)

2 Which **two** of the following statements are **true**?

- (a) The oceans occupy 10% of the earth's surface area and contain 20% of its water
- (b) The oceans are big enough to dilute pollutants
- (c) Coastal habitats are increasingly threatened by human activities
- (d) Oceans play a fundamental role in the functioning of the earth's climate
- (e) Most of the pollutants that end up in the oceans are from point sources

The **correct** combination of alternatives is

- (1) (a) and (c)
- (2) (b) and (d)
- (3) (b) and (e)
- (4) (c) and (d)
- (5) (d) and (e)

[TURN OVER]

3 Which **two** of the following statements about wetlands are **false**?

- (a) They serve as permanent and indestructible water storages
- (b) They have very high biological productivity
- (c) They provide a habitat for plants but not for animals
- (d) They have an impact on the hydrology of the catchments
- (e) They function as enormous water filters

The **correct** combination of alternatives is

- (1) (a) and (b)
- (2) (a) and (c)
- (3) (a) and (d)
- (4) (b) and (c)
- (5) (c) and (d)

4 Which **one** of the following pollutants that are common in coastal waters is non-biodegradable?

- (1) Sewage
- (2) Fertilisers
- (3) Oil spillages
- (4) Plastic
- (5) Domestic waste

5 The fragmentation of biological habitats

- (1) reduces the danger of damage caused by fires
- (2) limits the normal dispersion and colonisation of species
- (3) reduces the danger of invasion by other species
- (4) means that more species can be supported per unit area
- (5) means that the risk of species extinction will decline

6 Which **one** of the following biomes is particularly threatened by deforestation?

- (1) Pampas grasslands
- (2) Tropical rainforests
- (3) Boreal forests
- (4) Tundra forest
- (5) Savannah forest

7 In which **one** of the following parts of the world is the collection of fuel wood the **prime cause** of the degradation of wetlands?

- (1) Developed countries
- (2) Europe
- (3) Climatologically moderate parts of the world
- (4) USA
- (5) Developing countries

[TURN OVER]

- 8 The dumping of waste in the oceans is **problematic** because
- (1) waste cannot be diluted by the ocean waters
 - (2) certain types of waste remain in the ocean waters for several decades and even millennia
 - (3) the oceans cover a relatively small part of the earth's surface
 - (4) there are no conventions that regulate the dumping of waste in the oceans
 - (5) it can disrupt ocean currents
- 9 Which **one** of the following waste substances **most commonly** pollutes water in wetlands in developing countries?
- (1) Radioactive material
 - (2) Sewage
 - (3) Industrial chemicals
 - (4) Heavy metals
 - (5) Poisonous substances
- 10 Which **one** of the following statements about biodiversity is **true**?
- (1) Natural conditions could never cause a loss of biodiversity
 - (2) If a few species were removed from the food chain, the consequences would hardly be noticeable
 - (3) By now biologists have discovered all the species that has ever lived on earth
 - (4) Unsustainable institutional systems sometimes promote biodiversity
 - (5) More than half of all species live in humid tropical forests
- 11 The hydrosphere is one of the subsystems of the natural world Identify the correct aspects which are included in this subsystem
- (a) Oceans
 - (b) Atmosphere
 - (c) Ice
 - (d) Soil and rocks
- The **correct** combination of alternatives is
- (1) (a) and (b)
 - (2) (a) and (d)
 - (3) (a) and (c)
 - (4) (b) and (d)
- 12 The earth's atmosphere is a mixture of gases and extends to a height of approximately above sea level
- (1) 1 000 km
 - (2) 480 km
 - (3) 500 m
 - (4) 40 000 m

[TURN OVER]

- 13 A complex entity with many interactive components is referred to as a/an
- (1) subsystem
 - (2) ecology
 - (3) biological system
 - (4) ecosystem
- 14 The earth is years old and *homo sapiens* (modern humans) have been living on it between years
- (1) 136 million, 1 and 2 million
 - (2) 4 600 million, 100 and 200 thousand
 - (3) 4 600 thousand, 2 and 5 thousand
 - (4) 6 500 million, 2 and 3 million
- 15 Identify the main causes of deforestation in tropical Africa
- (a) Mining
 - (b) Logging
 - (c) Agriculture
 - (d) Desertification
- The **correct** combination of alternatives is
- (1) (a), (c) and (d)
 - (2) (a) and (d)
 - (3) (b), (c) and (d)
 - (4) (b) and (c)
 - (5) (a), (b), (c) and (d)
- 16 Deforestation is associated with both environmental and socio-economic impacts all over the world. The following are examples of these consequences
- (a) Soil erosion
 - (b) Habitat fragmentation
 - (c) Increased flooding
 - (d) Higher daytime temperatures
- The **correct** combination of alternatives is
- (1) (a) and (b)
 - (2) (a) and (c)
 - (3) (a), (c) and (d)
 - (4) (a), (b), (c) and (d)
- 17 One suggestion to prevent the exploitation of tropical forests is to cease the clearing of forestland for other land uses. This suggestion is based on the
- (1) Kyoto Protocol
 - (2) proposal of Fearnside
 - (3) ideas of eco-imperialism
 - (4) Tropical Forestry Action Plan

[TURN OVER]

18 A zone in which the loss of vegetation resources is outweighed by the advantages of a predictable water supply, is called a/an

- (1) piosphere
- (2) biosphere
- (3) overcultivation
- (4) hydrosphere

19 A fixed carrying capacity for grazing has become an unpopular concept because

- (1) overgrazing does not lead to land degradation
- (2) grazing pastures are driven by disturbances and are stable
- (3) the number of animals an area can support varies with time
- (4) pastoralists have developed mechanisms to cope with rainfall variability

The **correct** combination of alternatives is

- (1) (a) and (b)
- (2) (a) and (c)
- (3) (b), and (c)
- (4) (c) and (d)

20 Identify the main cause of desertification in the Sahel region during the 1970s and 1980s

- (1) Soil degradation
- (2) Wind erosion
- (3) Overcultivation
- (4) Overgrazing

21 The oceans of the earth is property

- (1) international
- (2) privately owned
- (3) national
- (4) common

22 Excessive nutrient flow to coastal environments, cause

- (1) over fishing
- (2) ocean sedimentation
- (3) coastal erosion
- (4) coastal eutrophication

23 There are two categories of marine pollutants Identify the **correct** combination

- (1) Non-conservative, conservative
- (2) Corrosive, non-corrosive
- (3) Toxic, non-toxic
- (4) Water based, oil based

[TURN OVER]

- 24 The Vistula River in Poland has a negative association because
- (1) the water is corrosive but can be used for drinking water
 - (2) 30% of the sewage entering the river is untreated
 - (3) an increase of organic pollutants occurred in the 1960s
 - (4) it is a dumping site for domestic and industrial waste
- 25 The introduction of the exotic Nile perch into Lake Victoria was associated with
- (1) an increase in most of the lake's endemic fish species
 - (2) a decrease in the fish industry and tourism activities
 - (3) a decrease in the lake's endemic fish species
 - (4) very few ecological impacts
- 26 The aim of the Ramsar International Convention was the protection of
- (1) forests
 - (2) wetlands
 - (3) endangered species
 - (4) fynbos
- 27 Identify the main source of waste in the United Kingdom
- (1) Agriculture
 - (2) Mining and quarrying
 - (3) Industries
 - (4) Sewage sludge
- 28 Which disposal site in the city of Niagara Falls illustrated the dangers of using the dilute-and-disperse method in the 1960s?
- (1) Westlake
 - (2) Niagara Falls
 - (3) Love Canal
 - (4) Washington
- 29 Which **one** of the following statements on waste disposal is **true**?
- (1) Landfills and incineration present the two most commonly used methods in waste disposal
 - (2) If a landfill is located on top of an aquifer, no measures are required to prevent pollution of the water due to leakages
 - (3) The costs associated with the cleaning up of contaminated landfill sites ought to be the responsibility of the people who live in the vicinity
 - (4) The most successful way to dispose of old motorcar tyres is to dump them in landfills

[TURN OVER]

30 Which **one** of the following statements on the recycling of waste is **true**?

- (1) Recycling can be encouraged by relevant legislation, the introduction of tax concessions and/or by using economic instruments
- (2) Owing to the energy wastage that occurs during recycling, the practice is not economically feasible
- (3) Much more waste is recycled in South Africa than in countries such as Japan and Germany
- (4) The Collect-a-Can campaign is a failure since only one in every ten cool drink tins in South Africa is recycled

[TOTAL SECTION A: 40]

[TURN OVER]

SECTION B**INSTRUCTION ANSWER ALL THE QUESTIONS****QUESTION 1**

Study figures 1 and 2 and then answer the following questions

**Figure 1 World map of possible drought stricken regions****Figure 2 Overgrazed pasture in Sudan (UNEP, 13 February 2006)****[TURN OVER]**

- 1 1 Identify on the map **two** shaded areas that are drought stricken regions (2)
- 1 2 Study **figure 2** and give evidence of land degradation (3)
- 1 3 Explain the root driving forces behind desertification (10)
- [15]**

QUESTION 2

A report has been compiled by Komati Basin Water Authority (KOBWA) regarding the construction of the Maguga Reservoir in the Komati River. The main aim of the project is to supply irrigation water to downstream farmers in both Swaziland and South Africa. The project has critical environmental impacts.

Classify the impacts that are associated with the construction of the Maguga Reservoir by grouping them under the two broad categories, namely environmental impacts and social impacts. Draw a table to illustrate your answer.

[15]

[Length guideline approximately 200 words]

QUESTION 3

Read the background and then answer the following questions.

Background: "In 2007, the science of climate change achieved an unfortunate milestone: the Intergovernmental Panel on Climate Change reached a consensus position that human-induced global warming is already causing physical and biological impacts worldwide. The most recent scientific work demonstrates that changes in the climate system are occurring in the patterns that scientists had predicted, but the observed changes are happening earlier and faster than expected – again, unfortunate. Although serious reductions in manmade greenhouse gas emissions must be undertaken to reduce the extent of future impacts, climate change is already here and some impacts are clearly unavoidable. It is imperative, therefore, that we take stock of current and projected impacts so that we may begin to prepare for a future unlike the past we have known (Ebi et al 2007)."

- 3 1 Identify and explain the impacts that can be associated with global warming (13)
- 3 2 Give two examples that illustrate the consequences of global warming (2)

[Length guideline approximately 200 words]

[15]

[TURN OVER]

QUESTION 4

Study figure 3 and then answer the following questions

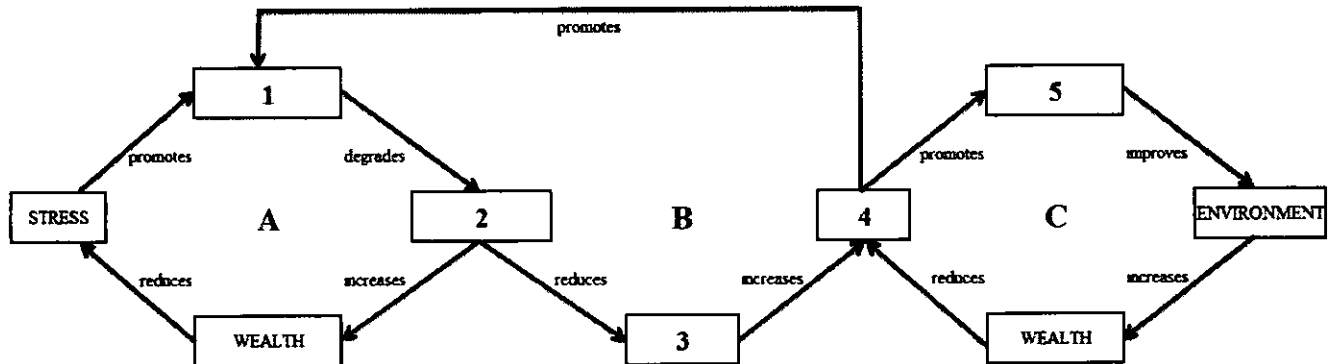


Figure 3: The three cycles illustrating the relationships between modes of development and the environment (Middleton 2008)

- 4 1 Study figure 3 and identify the missing information. Follow the numbering system (1–5) in the figure when you give your answers (5)
- 4 2 Sustainable development can only succeed if certain criteria are applied. Discuss the criteria that are necessary for the successful implementation of sustainable development in terms of inputs and outputs according to the three cycles in figure 3 (A, B and C) (10)

[Length guideline: approximately 200 words]

[15]

[TOTAL OF SECTION B: 60]
[TOTAL OF QUESTION PAPER: 100]

PART 1 (GENERAL/ALGEMEEN) DEEL 1

STUDY UNIT e.g. PSY100-X
 STUDIE-EENHEID bv. PSY100 X

1									
---	--	--	--	--	--	--	--	--	--

PAPER NUMBER
 VRAESTELNOMMER

STUDENT NUMBER
 STUDENTENOMMER

6									
---	--	--	--	--	--	--	--	--	--

c0	c0	c0	c0	c0	c0	c0	c0	c0	c0
c1	c1	c1	c1	c1	c1	c1	c1	c1	c1
c2	c2	c2	c2	c2	c2	c2	c2	c2	c2
c3	c3	c3	c3	c3	c3	c3	c3	c3	c3
c4	c4	c4	c4	c4	c4	c4	c4	c4	c4
c5	c5	c5	c5	c5	c5	c5	c5	c5	c5
c6	c6	c6	c6	c6	c6	c6	c6	c6	c6
c7	c7	c7	c7	c7	c7	c7	c7	c7	c7
c8	c8	c8	c8	c8	c8	c8	c8	c8	c8
c9	c9	c9	c9	c9	c9	c9	c9	c9	c9

INITIALS AND SURNAME
 VOORLETTERS EN VAN

DATE OF EXAMINATION
 DATUM VAN EKSAMEN

EXAMINATION CENTRE (E.G. PRETORIA)
 EKSAMENSENTRUM (BV. PRETORIA)

UNIQUE PAPER NO
 UNIEKE VRAESTEL NR

8									
---	--	--	--	--	--	--	--	--	--

c0	c0	c0	c0	c0	c0	c0	c0	c0	c0
c1	c1	c1	c1	c1	c1	c1	c1	c1	c1
c2	c2	c2	c2	c2	c2	c2	c2	c2	c2
c3	c3	c3	c3	c3	c3	c3	c3	c3	c3
c4	c4	c4	c4	c4	c4	c4	c4	c4	c4
c5	c5	c5	c5	c5	c5	c5	c5	c5	c5
c6	c6	c6	c6	c6	c6	c6	c6	c6	c6
c7	c7	c7	c7	c7	c7	c7	c7	c7	c7
c8	c8	c8	c8	c8	c8	c8	c8	c8	c8
c9	c9	c9	c9	c9	c9	c9	c9	c9	c9

For use by examination invigilator
 Vir gebruik deur eksamenopsiener

- | | |
|--|---|
| <p>IMPORTANT</p> <ol style="list-style-type: none"> USE ONLY AN HB PENCIL TO COMPLETE THIS SHEET MARK LIKE THIS CHECK THAT YOUR INITIALS AND SURNAME HAS BEEN FILLED IN CORRECTLY ENTER YOUR STUDENT NUMBER FROM LEFT TO RIGHT CHECK THAT YOUR STUDENT NUMBER HAS BEEN FILLED IN CORRECTLY CHECK THAT THE UNIQUE NUMBER HAS BEEN FILLED IN CORRECTLY CHECK THAT ONLY ONE ANSWER PER QUESTION HAS BEEN MARKED DO NOT FOLD | <p>BELANGRIK</p> <ol style="list-style-type: none"> GEBRUIK SLEGS N HB POTLOOD OM HIERDIE BLAD TE VOLTOOI MERK AS VOLG KONTROLEER DAT U VOORLETTERS EN VAN REG INGEVUL IS VUL U STUDENTENOMMER VAN LINKS NA REGS IN KONTROLEER DAT U DIE KORREKTE STUDENTENOMMER VERSTREK HET KONTROLEER DAT DIE UNIEKE NOMMER REG INGEVUL IS MAAK SEKER DAT NET EEN ALTERNATIEF PER VRAAG GEMERK IS MOENIE VOU NIE |
|--|---|

PART 2 (ANSWERS/ANTWOORDE) DEEL 2

1	c1	c2	c3	c4	c5
2	c1	c2	c3	c4	c5
3	c1	c2	c3	c4	c5
4	c1	c2	c3	c4	c5
5	c1	c2	c3	c4	c5
6	c1	c2	c3	c4	c5
7	c1	c2	c3	c4	c5
8	c1	c2	c3	c4	c5
9	c1	c2	c3	c4	c5
10	c1	c2	c3	c4	c5
11	c1	c2	c3	c4	c5
12	c1	c2	c3	c4	c5
13	c1	c2	c3	c4	c5
14	c1	c2	c3	c4	c5
15	c1	c2	c3	c4	c5
16	c1	c2	c3	c4	c5
17	c1	c2	c3	c4	c5
18	c1	c2	c3	c4	c5
19	c1	c2	c3	c4	c5
20	c1	c2	c3	c4	c5
21	c1	c2	c3	c4	c5
22	c1	c2	c3	c4	c5
23	c1	c2	c3	c4	c5
24	c1	c2	c3	c4	c5
25	c1	c2	c3	c4	c5
26	c1	c2	c3	c4	c5
27	c1	c2	c3	c4	c5
28	c1	c2	c3	c4	c5
29	c1	c2	c3	c4	c5
30	c1	c2	c3	c4	c5
31	c1	c2	c3	c4	c5
32	c1	c2	c3	c4	c5
33	c1	c2	c3	c4	c5
34	c1	c2	c3	c4	c5
35	c1	c2	c3	c4	c5

36	c1	c2	c3	c4	c5
37	c1	c2	c3	c4	c5
38	c1	c2	c3	c4	c5
39	c1	c2	c3	c4	c5
40	c1	c2	c3	c4	c5
41	c1	c2	c3	c4	c5
42	c1	c2	c3	c4	c5
43	c1	c2	c3	c4	c5
44	c1	c2	c3	c4	c5
45	c1	c2	c3	c4	c5
46	c1	c2	c3	c4	c5
47	c1	c2	c3	c4	c5
48	c1	c2	c3	c4	c5
49	c1	c2	c3	c4	c5
50	c1	c2	c3	c4	c5
51	c1	c2	c3	c4	c5
52	c1	c2	c3	c4	c5
53	c1	c2	c3	c4	c5
54	c1	c2	c3	c4	c5
55	c1	c2	c3	c4	c5
56	c1	c2	c3	c4	c5
57	c1	c2	c3	c4	c5
58	c1	c2	c3	c4	c5
59	c1	c2	c3	c4	c5
60	c1	c2	c3	c4	c5
61	c1	c2	c3	c4	c5
62	c1	c2	c3	c4	c5
63	c1	c2	c3	c4	c5
64	c1	c2	c3	c4	c5
65	c1	c2	c3	c4	c5
66	c1	c2	c3	c4	c5
67	c1	c2	c3	c4	c5
68	c1	c2	c3	c4	c5
69	c1	c2	c3	c4	c5
70	c1	c2	c3	c4	c5

71	c1	c2	c3	c4	c5
72	c1	c2	c3	c4	c5
73	c1	c2	c3	c4	c5
74	c1	c2	c3	c4	c5
75	c1	c2	c3	c4	c5
76	c1	c2	c3	c4	c5
77	c1	c2	c3	c4	c5
78	c1	c2	c3	c4	c5
79	c1	c2	c3	c4	c5
80	c1	c2	c3	c4	c5
81	c1	c2	c3	c4	c5
82	c1	c2	c3	c4	c5
83	c1	c2	c3	c4	c5
84	c1	c2	c3	c4	c5
85	c1	c2	c3	c4	c5
86	c1	c2	c3	c4	c5
87	c1	c2	c3	c4	c5
88	c1	c2	c3	c4	c5
89	c1	c2	c3	c4	c5
90	c1	c2	c3	c4	c5
91	c1	c2	c3	c4	c5
92	c1	c2	c3	c4	c5
93	c1	c2	c3	c4	c5
94	c1	c2	c3	c4	c5
95	c1	c2	c3	c4	c5
96	c1	c2	c3	c4	c5
97	c1	c2	c3	c4	c5
98	c1	c2	c3	c4	c5
99	c1	c2	c3	c4	c5
100	c1	c2	c3	c4	c5
101	c1	c2	c3	c4	c5
102	c1	c2	c3	c4	c5
103	c1	c2	c3	c4	c5
104	c1	c2	c3	c4	c5
105	c1	c2	c3	c4	c5

106	c1	c2	c3	c4	c5
107	c1	c2	c3	c4	c5
108	c1	c2	c3	c4	c5
109	c1	c2	c3	c4	c5
110	c1	c2	c3	c4	c5
111	c1	c2	c3	c4	c5
112	c1	c2	c3	c4	c5
113	c1	c2	c3	c4	c5
114	c1	c2	c3	c4	c5
115	c1	c2	c3	c4	c5
116	c1	c2	c3	c4	c5
117	c1	c2	c3	c4	c5
118	c1	c2	c3	c4	c5
119	c1	c2	c3	c4	c5
120	c1	c2	c3	c4	c5
121	c1	c2	c3	c4	c5
122	c1	c2	c3	c4	c5
123	c1	c2	c3	c4	c5
124	c1	c2	c3	c4	c5
125	c1	c2	c3	c4	c5
126	c1	c2	c3	c4	c5
127	c1	c2	c3	c4	c5
128	c1	c2	c3	c4	c5
129	c1	c2	c3	c4	c5
130	c1	c2	c3	c4	c5
131	c1	c2	c3	c4	c5
132	c1	c2	c3	c4	c5
133	c1	c2	c3	c4	c5
134	c1	c2	c3	c4	c5
135	c1	c2	c3	c4	c5
136	c1	c2	c3	c4	c5
137	c1	c2	c3	c4	c5
138	c1	c2	c3	c4	c5
139	c1	c2	c3	c4	c5
140	c1	c2	c3	c4	c5

Specimen only