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SECOND OPPORTUNITY / SUPPLEMENTARY EXAMINATION QUESTION PAPER

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This question paper consists of **11 questions** and **6 pages**, including this front page

Instructions

1. Answer ALL the questions.
2. Read the entire question paper before answering the questions.
3. Questions may be answered in any sequence, provided that they are numbered clearly and correctly.
4. Answers may be supplemented with sketches, even if not asked specifically.
5. Write clearly and legibly.

Permissible Materials

1. Pen, pencil, eraser, ruler, calculator
2. Examination script, examination paper

Question 1:

Select the single *WRONG* answer to each of the following questions. Just write down the number, for example (a) D.

- (a) The concept of 'rangelands' include
A savannas
B croplands
C grasslands
D semi-deserts
E woodlands (1)
- (b) Eutrophication of water bodies is caused or enhanced by
A high temperatures
B excess phosphorus and nitrogen in runoff
C untreated sewage being discharged into rivers
D heavy-metal pollution from mines
E effluent from cattle feedlots (1)
- (c) Supply-side water management includes
A commissioning desalinisation plants
B geohydrological investigations to find new, productive aquifers
C signing agreements with neighbouring countries on sharing of water resources
D inter-basin water transfers
E penalising end-users for excessive water-use (1)
- (d) Seabird deaths caused by longline fishing can be decreased by
A weighing down the longlines
B deploying longlines at night
C attaching floating buoys to longlines
D scaring birds away with plastic streamers attached to longlines
E using 'hookpods' that only open once deep enough to be out of reach of birds (1)
- (e) Water is provided to
A Rehoboth by Oanob Dam
B Windhoek by Goreangab Dam
C Keetmanshoop by Naute Dam
D Windhoek by Omatako Dam
E Gobabis by Tilda Viljoen Dam (1)

- (f) Abiotic factors of an ecosystem include the
A non-living organisms
B chemical composition of the soil and water
C topography
D microclimate
E heat and light (1)
- (g) Land degradation is caused or worsened by ...
A leaving crop residues on fields
B overgrazing of dryland rangelands
C desiccation of soils
D extended heatwaves
E crop rotation (1)
- (h) Coral reefs are threatened by
A ocean acidification
B light clutter
C climate change
D blast fishing
E invasive alien species (1)
- (i) The following are Namibian mines:
A Skorpion Zinc Mine
B Okandjande Graphite Mine
C Tsumis Copper Mine
D Otjikoto Gold Mine
E Husab Uranium Mine (1)
- (j) Sea turtles are harmed by marine plastic pollution through
A ingesting micro-plastics
B becoming entangled in nets
C mistaking plastic bags for jellyfish
D getting plastic straws stuck up their noses
E seismic exploration for oil (1)
-
- [10]**

Question 2:

- (a) List and explain six (6) cultural services provided by soil. Write full, descriptive sentences.

[6]

Question 10:

- (a) Why is it important to preserve wild relatives of edible plant species? (5)
- (b) List and provide explanations of three (3) threats to wildlife that contribute to the dramatic global decline in biodiversity. (12)
- [17]**
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Question 11

Match each term in Column 1 with the most appropriate description in Column 2. Write down only the *capital letter* from Column 2 next to the *small letter* from Column 1, for example (a) M.

<u>Column 1</u>	<u>Column 2</u>
(a) Graminoids	A An ecosystem of salt-tolerant vegetation growing in tropical and subtropical intertidal zones and river estuaries
(b) Savanna	B Number of individuals per species
(c) Endemic	C Rainforest, tundra, taiga, desert, savanna
(d) Biomes	D Orchards of mango trees
(e) Mangroves	E A plant species that sheds its leaves during the dry or cold season
(f) Biodiversity	F An invasive indigenous species
(g) Species abundance	G A group of interdependent organisms inhabiting the same area and interacting with one another
(h) Exotic	H Grasses, sedges and rushes
(i) Encroacher	I A plant species that retains its leaves throughout the year
(j) Deciduous	J An organism found only in a specific area, and nowhere else on Earth
	K A species living for a very short time, during which it completes its entire lifecycle
	L Grass-dominated ecosystem with scattered trees and