GEOGRAPHY

9173/01

27 June 2023

2 Hours

Additional Materials: Insert

READ THESE INSTRUCTIONS FIRST

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.
Write your Centre number, index number and name on the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE ON ANY BARCODES.

Answer Question 1 in **Section A**

Answer Question 2 in **Section B**

Answer one question in **Section C**.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **4** printed pages.

Section A

Cluster 4: Fieldwork (15 marks)

1 A group of 25 Geography students undertook an investigation about the flood risk along the Pekan River in Pekan, Malaysia which experiences a tropical monsoon (Am) climate.

The students have decided to conduct the study at five sites which are selected at 500-metre intervals – Sites A, B C, D and E.

They decided to collect the data on a weekday in June at 10am.

The students were divided into five teams of five to collect data. At each site, the team gathered the primary data on channel cross-sectional area and river velocity with the following equipment:
- 1 x Unweighted tape measure
- 1 x Metre rule
- 1 x Stopwatch
- 1 x Orange (as floating device)
- 2 x Ranging pole

However, at Site A, the team lost their orange and used a small leaf found at the river bank as a floating device instead. Furthermore, during the fieldwork a heavy rain occurred. All teams had to halt their fieldwork and only managed to measure for river velocity once at each site.

Resource 1 shows a map of the Sites A, B, C, D and E along Pekan River. Resource 2 shows a photograph of Site A.

(a) With reference to Resource 1, suggest a research question for the geographical investigation. Explain your choice of research question. [4]

(b) With reference to Resource 1, identify the sampling method used in selecting the sites for data collection and explain two benefits of this sampling method. [3]

(c) With reference to Resource 2, suggest how the students could minimise potential risks during data collection. [4]

(d) Explain why the data collected for river velocity at the various sites may not be accurate and reliable. [4]

Section B

Cluster 2: Tropical Environments (30 marks)

2   Resource 3 shows the distribution of seasonally humid tropical savannah climates in Africa. Savannah climates can be subdivided into three categories – wet, dry and bush, depending on the length of the dry season. Resource 4 shows the climographs of three African cities, Tombouctou, Ouagadougou and Kisangani. Resource 5 shows the landuse cover in the Niger River Delta.

   (a)   With reference to Resource 3, describe the distribution of seasonally humid tropical savannah climates.   [4]

   (b)   Explain the temperature characteristics of Kisangani shown in Resource 4.   [4]

   (c)   With reference to Resource 4, distinguish the rainfall patterns of the three cities in Africa.   [6]

   (d)   Using Resource 5, suggest how an increase in built-up areas in the Niger River Delta would affect its flows and storages within the drainage basin.   [5]

   (e)   Account for the shape of the Niger River Delta, shown in Resource 5.   [6]

   (f)   Explain the impact of human activities on the ecosystem services provided by deltas, such as the Niger Delta.   [5]

Section C

Answer EITHER Question 3 OR Question 4.

Cluster 2: Tropical Environments (20 marks)

3 'Human factors are most significant in contributing to fluvial floods in the humid tropics.'

Evaluate this statement. [20]

4 'Climate is the most important factor influencing weathering processes in the tropics.'

Evaluate this statement. [20]

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